AUGUST
1952

Amateur Radio

JOURNAL OF
THE WIRELESS
INSTITUTE OF
AUSTRALIA

For the Experimenter
and Radio Enthusiast

9D.

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AUGUST — — — 1952
Vol. 20. No. 8.

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T. D. HOGAN, VK3HX,
Telephone: UM 1732.

MANAGING EDITOR:
J. G. MARSLAND, VK3NY.

TECHNICAL EDITOR:
J. C. DUNCAN, VK3VZ.

TECHNICAL STAFF:
L. B. FISHER, VK3AFF.

COMPILATION:
R. W. HIGGINBOTHAM, VK3RN.

CIRCULATION:
I. K. SEWELL, VK3IK.

ADVERTISING REPRESENTATIVE:
W. J. LEWIS,
20 Queen St., Melbourne, C.1.
Telephone: MU 5154.

PRINTERS:
"RICHMOND CHRONICLE,"
Shakespeare St., Richmond, E.1.
Telephone: JB 2419.

MSS. and Magazine Correspondence should be forwarded to the Editor, "Amateur Radio," Law Court Chambers, 191 Queen St., Melbourne, C.1, on or before the 8th of each month.

Subscription rate in Australia is 9/- per annum, in advance (post paid) and A10/6 in all other countries.

Wireless Institute of Australia (Victorian Division) Rooms' Telephone is FJ 6997.

WI BROADCASTS

All Amateurs are urged to keep these frequencies clear during, and for a period of 15 minutes after, the official Broadcasts.

VK2WI: Sundays, 1100 hours EST, 7146 Kc. and 2000 hours EST 50 and 144 Mc. No frequency checks available from VK2WI. Intrastate working frequency, 7125 Kc.

VK3WI: Sundays, 1130 hours EST, simultaneously on 3573 and 7146 Kc. and re-broadcast on 50 and 144 Mc. Intrastate working frequency 7135 Kc. Individual frequency checks of Amateur Stations given when VK3WI is on the air.

VK1WI: Sundays, 0900 hours EST, simultaneously on 7146 and 14342 Kc. 7065 Kc. channel is used from 0930 to 1030 hours each Sunday for the W.I.A. country hook-up. No frequency checks available.

VK5WI: Sundays, 1000 hours SAST, on 7146 Kc. Frequency checks are given by VK5DW by arrangements only on the 7 and 14 Mc. bands.

VK6WI: Sundays, 0930 hours WAST, on 7146 Kc. No frequency checks available.

VK7WI: Sundays, at 1000 hours EST, on 7146 Kc. and 146.5 Mc. No frequency checks are available.

AMATEUR RADIO

Published by the Wireless Institute of Australia,
Law Court Chambers, 191 Queen Street,
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EDITORIAL

★

"LEST WE FORGET"

Comes the month of August each year and minds turn back to memories of the war years, 1939-1945, when a great many of the Amateurs of Australia were in uniform serving their king and country in the grimest war the history of mankind has ever known.

We think of those war years in the month of August because it was in this month, 1945, that victory in the Pacific was an accomplished fact, signalling the cessation of hostilities and the expectation of a prolonged peace throughout the nations of the earth.

Looking back over those grim years we recall times of hard work, of sometimes long arduous hours on duty, of drilling, marching, training, of the more pleasant times during hours of relaxation or days spent on leave, and the social and entertainment side of service life.

But above all we recall the friendships we made with men from all walks of life who had given up their professions and occupations to join forces in the common cause in defence of democracy; of men who shoulder to shoulder suffered the pangs of hunger and thirst, encountered untold dangers; were in need of our friendship as indeed we were in need of theirs; of men who died that we and the people of our country might live on in peace.

It is of these men—Amateurs who paid the supreme sacrifice—that we think most at this time, and in our humble way honor their memory by our Remembrance Day Contest.

Every year this Contest is organised by the W.I.A. over the week-end in August nearest to the fifteenth of the month to perpetuate the memory of our gallant members and fellow Amateurs who passed to the great beyond in the service of their country.

The rules are simple and appear elsewhere in this issue for all those who can participate. You are asked to do so even if only for half an hour as a mark of respect.

"They gave their lives. For that public gift, they received a praise which never ages and a tomb most glorious—not so much the tomb in which they lie, but that in which their fame survives, to be remembered for ever when occasion comes for word or deed . . ."

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THE CONTENTS . . .

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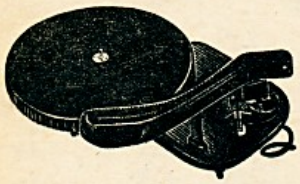

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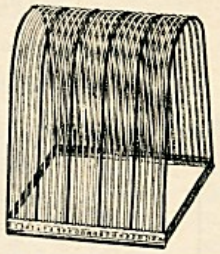

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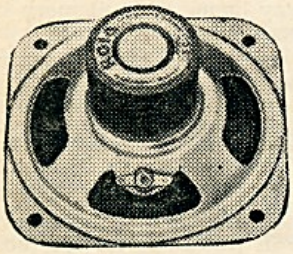

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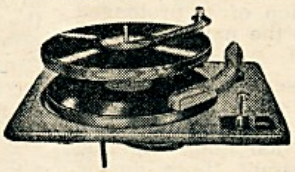

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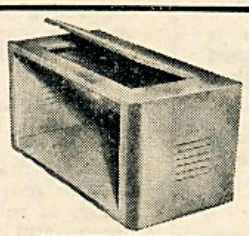

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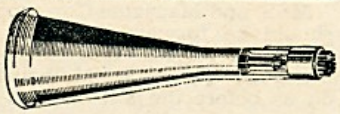

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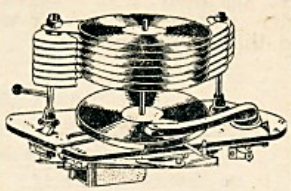

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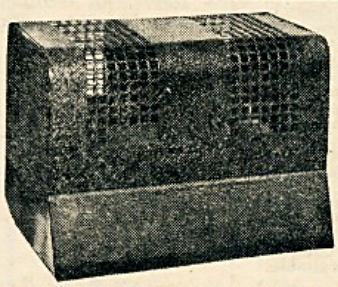

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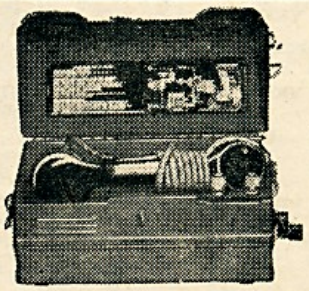

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AN ALL-BAND TANK CIRCUIT

BY R. S. CHOATE,* VK6RK

Those Amateurs who like an all-band transmitter and have run into the problem of band switching or plug-in coils, may be interested in this circuit which has been in operation in my transmitter for some time. The scheme is modified from an all-band final and coupling system which appeared in "QST" some time ago and later in the A.R.R.L. Handbook. It is very simple and it can be used for any pair of bands i.e. 80-40 and 20-10, or say 40-20 and 10-6, etc. It takes up little space, little can go wrong with it, and it can be easily adapted for portable work.

Referring to Fig. 1 it will be seen that V1 is a driver tube which will normally be a doubler or tripler. The plate circuit of V1 and grid circuit of V2 and V3 consists of the network L1 L2 and C1 and C2.

Assuming that the transmitter is for 80-40-20-10 bands, the circuit works as follows: If an 80 metre signal is placed on the grid of V1, C2 is rotated to near maximum capacity and resonates coil L1 to 3.5 Mc. At near minimum capacity, it will resonate L1 to 7 Mc. providing of course that L1 is of suitable value. Injecting a 7 Mc. signal on V1, or a 14 Mc. signal, C2 will resonate L2 to 14 Mc. at near full capacity and to 28 Mc. at near minimum capacity. There will, of course, be other resonances on both coils which will vary according to the input frequency, and in the initial stages a wave meter check is necessary to select the right resonances.

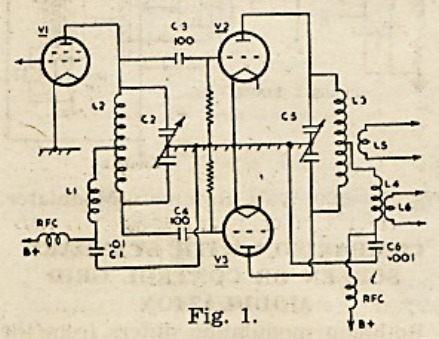


Fig. 1.

Now when resonances occur with L1 C2, the condenser C2 being a two gang or split stator, tunes L1 in parallel and the coil L2 acts merely as connections from the "hot" ends of C2 to the coil L1. The current will be in phase opposition in L2 and will therefore cancel any r.f. in this coil on that frequency. On 20 and 10, the coil L2 and condenser C2 resonate with the two halves of C2 in series and inductance L1 becomes an r.f.c. of small value connecting the h.t. to the centre point of L2. Thus the drive on V2 and V3 is in **parallel** on 80 and 40, and in **push-pull** on 20 and 10.

The same applies to the output circuit, C5 L3 and L4. Here C5 resonates L3 in push-pull on 20 and 10, and resonates L4 on 80 and 40. Output for 20 and 10 is taken by a link at the centre of L3 and output for 40 and 80 by link at the "cold" end of L4. L5 in Fig. 1 being the 10-20 link, and L6 the link for 40 and 80.

An additional modification can be made to the output circuit by replacing C6 with a large variable condenser and coupling any odd length of wire to the junction of this condenser and L4. This will give a pi output circuit on 40 and 80 for portable work.

Dimensions for the coils and values for the tuning condensers are not given purposely. The split stators or two gangs have to be sufficiently large to resonant the coils for two bands in each case. The coils will have to be pruned to fit and, in particular, harmonicly related resonance points should not coincide. That is the resonance point for 40 and 10 should be moved as far as possible from each other by pruning the coils.

The circuit is excellent for c.w. or for n.b.f.m. On phone, the L/C ratios are not optimum, but in practice works quite OK. The tubes can be anything of course, but it is better to use tubes such as 829 or 815 or 807s. If triodes are used, and there is no reason why they should not be, then ordinary "cross over" neutralisation will take care of the push-pull aspect and link neutralisation for the 80-40 system between L1 and L4.

All of the usual items, such as metering, screen by-pass, and feed, etc., have been left out so as not to confuse the issue. In any case, they will vary according to the tubes used. I use a pair of 807s and 6BO has a pair of 6M5s in a nice little portable rig for 6 and 40. Of course one tube only in the final will work quite OK.

Note that on the lower frequencies, coils are tuned in "parallel," and the higher frequency ones in "push-pull," the values of L1 and L2 are about 2 : 1 in inductance.

* 228 Hensman Road, Subiaco, W.A.

SUNSPOTS AND DX

BY J. A. GAZARD,† VK5JG

Back in 1947 and 1948 even the new Amateur equipped with an 807 final, plus a "piece of wire" for an antenna, could work DX on 14 Mc. nearly all round the clock.

Today conditions are very different and although 14 Mc. DX is still worked, it is only there at short intervals of the day and not every day. The cause of this change is the state of the ionosphere which is affected by sunspots. These spots appear on the sun in varying numbers from day to day and the numbers have been recorded at the Zurich Observatory since the year 1750. The average daily numbers per year have been plotted and it is seen that they vary from a maximum lying between 50 and 150, to a minimum approaching zero in a well-defined cycle of approximately eleven years from maximum to maximum.

It has also been found that the maximum usable frequency (m.u.f.) varies directly with the sunspot number, so that when the sunspot number is a maximum, DX conditions are best; and at a minimum, DX conditions are worst.

1947-1948 was a time of sunspot maximum and we are now approaching a minimum. The prediction charts published in "Amateur Radio" have shown a corresponding decline in m.u.f. over this period. In "QST" of December, 1947, there appeared an article by Kenneth A. Norton, of the Propagation Laboratory, U.S. National Bureau of Standards, on the effects of sunspots on high frequency transmission, and from curves given in this article, the recent maxima and minima have been taken as follows:—

Minima	Maxima
1923	1928
1933	1938
1944	1948

The next minimum is predicted for 1954-5. It is interesting to note that the last minimum occurred during the war and was well past before Amateur activity recommenced, so that only old timers have operated through a minimum.

The 28 Mc. band is most affected by sunspots and it may surprise newcomers to know that, although a few enthusiasts kept trying, no International DX was reported on 28 Mc. from 1931 until early 1935 and that "QST" of November, 1935, reports the making of the first W.A.C. on 28 Mc. during October, 1935, and in the same issue a contact between VK and Europe in October, 1935, is stated to be the first between these two continents on 28 Mc.

Not having experienced a previous minimum, many Amateurs who found 28 Mc. DX so good in 1936-39 and 1946-49, regarded this band, with its easily constructed rotary beams, as ideal and permanently settled there and dismantled their lower frequency antennae.

What can we expect in the next few years? In accordance with sunspot predictions and charts given in the "QST" article, after this summer (1951-52), there should be no F^2 DX on 28 Mc. until the summer of 1955-6. Sporadic E reflections may permit occasional Interstate working, but otherwise the band will be just a local band.

14 Mc. DX will still be worked during the minimum, but generally only on a few days of the month and at the most favourable time as predicted by the m.u.f. charts. A lot of listening per contact will be required.

7 Mc., being less affected, may be the best DX band in the next few years. If rotary beams were possible on forty, this would be a good DX band at any time, but there are other types of antenna which are capable of "stretching out" signals. A ground plane antenna for 7 Mc. was described in "QST" of June, 1947, and if tall poles and plenty of ground space are available, a 7 Mc. 8JK fixed beam directed on Europe or North America would make an interesting experiment.

† 39 Glenhuntly Street, Woodville, S.A.

The Rothman System of Modulation

BY JOHN CLARKE,* VK2DZ

When new systems of modulation are first introduced, the Ham fraternity usually are very sceptical and want to know the whys and wherefores, and always ask, does it work?

The writer has tried this system with excellent results as many VK, ZL, and some DX stations will testify, and it is the writer's intention herein to outline briefly the theory of operation and its practical application to Amateur transmitters.

As we all know, there are two general types of modulation, namely—

(1) Variable efficiency systems wherein the plate power input remains constant and only the efficiency of the tube is varied to achieve modulation.

(2) Constant efficiency systems which employ variable plate power input and modulate the plate voltage and plate current to achieve modulation by variation of these two factors.

Now the Rothman system comes under the second category due to the fact that modulation is generated as variations of plate current which thereby varies the plate power input.

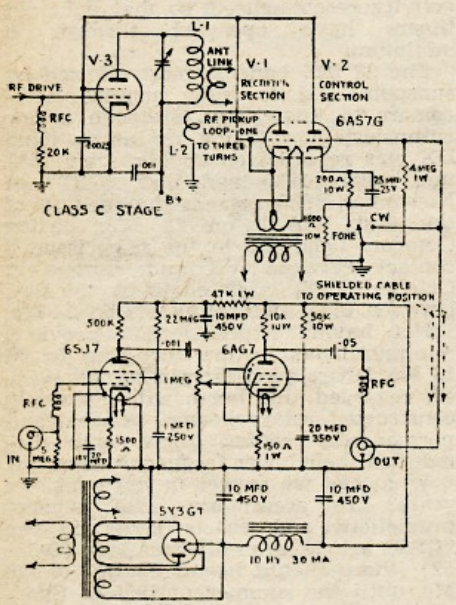


Fig. 1.—1 Kw. Rothman Modulator and Speech Amplifier.

THEORY OF OPERATION

The Rothman system of screen grid modulation achieves efficiency comparable to high level modulation and this is accomplished by the use of demodulated r.f. feedback to the screen grid electrode of the class C stage in such a manner that a substantially constant r.f. angle of plate current flow is maintained during the modulation cycle, thereby preventing "efficiency modulation."

In the circuit diagram (Fig. 1), r.f. energy from the plate tank circuit V3, is fed to the rectifier V1 by means of the pick-up loop L2. The de-modulated r.f. containing the modulation envelope, is then fed to the screen grid of V3. Control of this feedback link is effected by the tube V2 into the grid of which the modulation intelligence is introduced. The main requirements for this circuitry are—

Correct adjustment of feedback link L2;

Correct biasing of control section V2;

Low plate resistance characteristics in V1 and V2.

Although tubes shown in Fig. 1 are new American types, suitable Australian types are available and the type 80 and 6CD6 can be used with excellent results.

The feedback circuit operates to reinforce the modulating signal and a negative-going signal at the grid of V2 causes a rise in screen grid voltage. This rise in screen grid voltage causes the r.f. output of V3 to increase, thereby resulting in an increased screen voltage output from V1. At this point, the cycle again repeats at a very rapid rate, building up almost instantaneously to a point of equilibrium, bringing about a high average of screen grid voltage which is correct for any given value of plate power input during the application of the modulation cycle. For a positive-going signal at the grid of V2, the action is identical, but in the opposite direction and all screen voltage to the Class C stage is reduced to zero.

COMPARISON WITH STANDARD HIGH LEVEL PLATE MODULATION

In standard high level plate modulation, the modulating power is introduced in series with the d.c. plate input of the Class C stage. The resultant effect is to modulate the plate voltage between zero and twice the power supply voltage output. This modulation of plate voltage results in a directly corresponding modulation of plate current and for 100 per cent. modulation, the power input to the Class C stage at the positive peak of modulation is therefore 2Ep times 2Ip or four times the carrier power level. At the negative peak of the modulation cycle, both Ep and Ip are substantially zero.

Now with the Rothman system, Ep is kept constant and all the modulation components must be generated as a variation of the plate current. It is therefore necessary that the d.c. plate voltage be equal to the sum of the d.c. and a.c. components utilised in normal plate modulation. This quantity is equal to twice the d.c. plate voltage used in high level modulation systems. Thus, with Rothman modulation the average plate current and screen voltage for constant carrier conditions is adjusted for one-half the values utilised in normal high level modulation. This is done in order to enable symmetrical modulation of these parameters without approaching tube saturation conditions, and at the same time allowing equal plate input through use of twice the plate voltage.

Since in Rothman modulation the side band component of the plate power input must be supplied by the Class C plate power supply, a 50 per cent. increase of average plate current occurs with a 100 per cent. modulation. The plate dissipation of the Class C amplifier tube is identical with that of high level plate modulation for the same plate input, since in the latter the modulation energy must be converted to side-band energy by the Class C tube.

In rating plate power input levels for high level modulated Class C amplifier tubes, it is common to decrease the allowable plate input from the c.w. rating by an amount equal to the high level modulating energy and this is done because of the fact that the d.c. plate voltage and current meters do not read the modulation component of plate power input since it is symmetrically disposed about the carrier power level. In Rothman modulation, however, the d.c. indicating meters always read the true total average plate power input. The allowable plate power input rating for Rothman modulation is therefore exactly equal to the c.w. rating for the tube used.

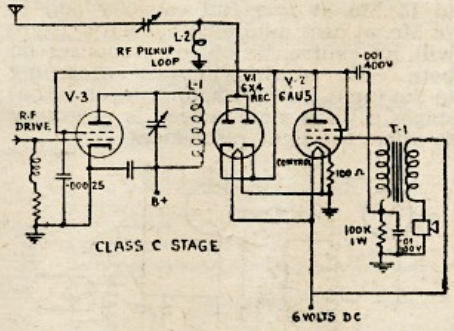


Fig. 2.—100 Watt Rothman Modulator.

COMPARISON WITH STANDARD SCREEN OR CONTROL GRID MODULATION

Rothman modulation differs from the ordinary screen or control grid modulation in that efficiency modulation is prevented by the maintenance of a constant r.f. angle of plate current flow in the Class C amplifier stage. Accordingly, the generation of side-bands is accompanied by a corresponding rise in plate power input. This characteristic is not true of ordinary control grid or screen grid modulation which maintains a constant average level of plate input and generates side-bands by modulation of the angle of plate current flow, e.g., efficiency modulation.

SUMMARISING

At this stage the reader no doubt will say "how do we obtain the same plate power input with the Rothman system as compared with high level modulation, under comparison?"

Assuming we have a 60 watt plate power input to the Class C stage with 600 volts on the plate at 100 Ma. plate current reading, we would probably

* King Street, Newcastle West, N.S.W.

have somewhere around 200-250 volts on the screen. Now with the Rothman system, it is necessary that the d.c. plate voltage he equal to the sum of the d.c. and a.c. components utilised in normal plate modulation and this quantity, as previously explained, is twice the usual d.c. plate voltage, although in practice it is found that an increase of 50 per cent. of the plate voltage will give excellent results. For example—

High Level:
600 v. (Ep) × 100 Ma. (Ip) = 30 watts

Rothman:
1200 v. (Ep) × 50 Ma. (Ip) = 60 watts

At this point it is well to bear in mind that the only source of d.c. screen voltage supply to the Class C amplifier tube is by means of voltage supplied by the rectified r.f. taken from V1 of Fig. 1.

MOBILE EQUIPMENT

Fig. 2 shows a Rothman modulator for 100 watts plate power input which although shown as a complete mobile unit due to the fact that it is d.c. operated, can easily be changed over for a.c. operation to meet the requirements for the standard 100 watt transmitter license as applied to Australian Amateurs. The circuit is straight forward and it works well. The writer has used this modulator, which only measures 4 inches by 4 inches by 2 inches deep, with great success to modulate his 100 watt Class C stage. Here again Australian type tubes can be used, the principal requirement being low plate resistance characteristics.

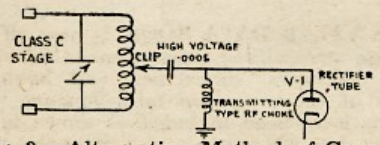


Fig. 3.—Alternative Method of Coupling R.F. to Modulator.

ADJUSTMENTS

1. Disconnect your screen supply altogether from the screen grid electrode.

2. See that your plate voltage to the Class C final tube is at least half as great again as that used with high level modulation for the same plate power input.

3. Back out your aerial coupling link to minimum.

4. Tune the final tank for resonance and you will notice that the resonance point will be indicated by the maximum plate current reading and not the usual dip, this being because the screen grid voltage has been removed.

5. Couple the r.f. pick-up coil (attached to the de-modulator of the twin triode) to the cold end of the Class C stage and adjust same until the screen grid voltmeter reading shows half the voltage stated by the manufacturer's chart in respect of the plate voltage applied and this voltage must be obtained by application of modulation, i.e. whistle into the microphone at a constant level and adjust the pick-up coil until you obtain the required screen grid voltage.

6. Now couple your antenna coil to get a rise in plate current and when the plate current starts to fall off, this is the point at which the coupling to the antenna is correctly adjusted.

7. Don't be misled by small plate current readings because that shown on the meter is only the average value, the peak being twice that shown. However, if you have an aerial ammeter or pea lamp, you will see the energy that is being transferred to the aerial and when you apply modulation (speech), you will see the terrific increase in this energy due to the audio voltage adding to the de-modulated screen grid voltage and thereby varying the r.f. output of the transmitter.

The adjustments might seem complicated, but they are really quite simple and no difficulty should be experienced and once you get the correct settings, it is all plain sailing.

Unlike plate high level modulation, the plate current will kick about frantically, due to the modulation in this system appearing as variations of plate current.

LIMITATIONS AND SPECIAL REQUIREMENTS OF THE SYSTEM

The degree to which Rothman modulation can approach 100 per cent. is affected by the screen characteristics of the Class C amplifier tube used. With tubes possessing a reasonably high screen to plate transconductance, modulation or percentages between 90 and 95 per cent. are readily obtained. The plate power supply for the r.f. stage must be designed for twice the voltage normally used and must be capable of an output equal to the sum of the carrier and side-band components of the plate power input to the modulated Class C stage.

Care must be exercised in adjusting the feedback link to insure that the screen voltage at the peak of the modulation cycle does not approach screen saturation. This is necessary in order to prevent excessive screen dissipation and efficiency modulation with resultant decrease in plate efficiency.

Since the degree of output coupling to the r.f. load affects the amount of energy in the plate tank and therefore the screen feedback link, adjustment of output coupling and feedback coupling are interdependent.

Plate resistance of the control and rectifier tubes should be low, about 500 ohms being ideal.

ADVANTAGES OF THE ROTHMAN SYSTEM

1. Elimination of bulky and heavy high level modulation components including Class B modulators, drivers, and modulation transformers.

2. Consolidation of plate power requirements into a single power supply at twice the normal impedance, thereby enabling a saving in space and weight.

3. Capable of linear modulation at extremely high modulation frequencies with all the flat response characteristics of resistance coupled operation.

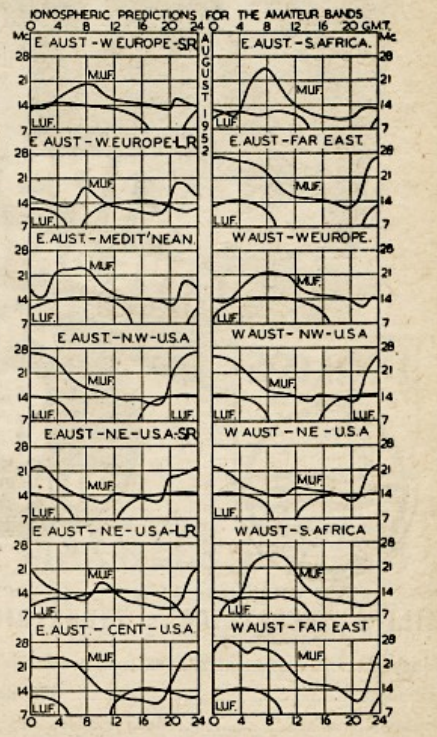
4. Elimination of separate screen power supply or power wasting voltage dropping or dividing resistors.

5. Since screen power is generated only under conditions of resonance, protective fixed bias is unnecessary and superfluous.

6. Controlled carrier operation is readily obtainable with extremely simple circuitry.

7. Negative feedback of the demodulated intelligence is easily accomplished by merely connecting a suitable network between the plate and grid electrodes of the control tube as shown in Fig. 2.

PREDICTION CHART FOR AUG., 1952



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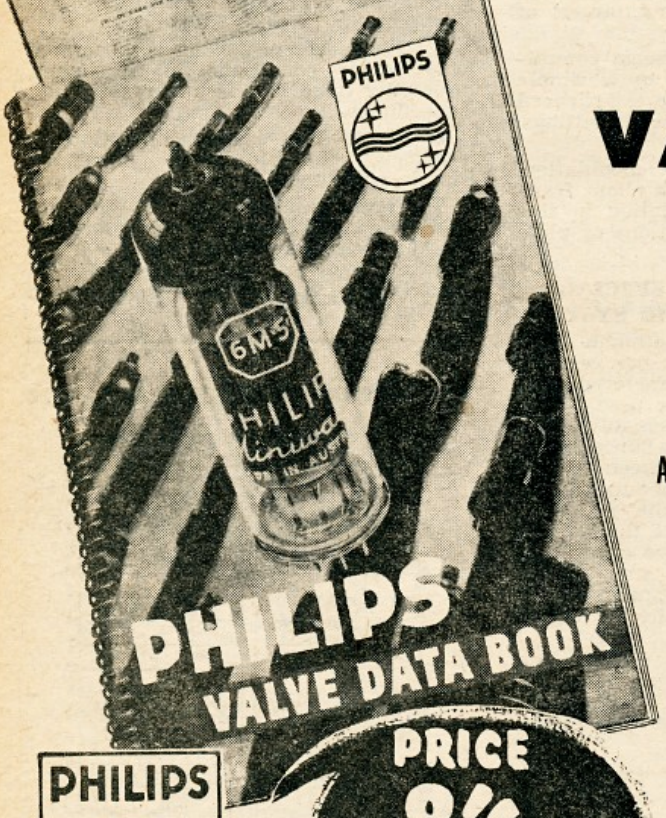

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DX NOTES BY VK4QL*

June was not very successful from your scribe's point of view with my own reduced activities, not much news from any of the gang, and wondering how much of my Sydney QTH will be in one piece after the damage it has been receiving in the storms. This is one case where "out of sight, out of mind" does not apply.

The DX ethics of some of the W stations on one or two rare ones that appeared, namely, VR7AB, FR7ZA and FK8, made one wonder just what is happening to the Ham spirit as it used to be known. A W7 for one example, moved his Tx back and forth over more than 5 Kc. of an FK8, calling all the time, thus effectively making sure, if he did not get the station, others would not either. Later in the notes mention will be made of VR7AB. The goings on, on this poor guy's freq. were amazing. Even the days he was not on the air, he was still being called blind by one or two. When he was on, those who missed out, carried on back chat on his own freq., appeals from VR7AB having no retarding effect.

Early in the month, both 7 and 14 Mc. showed some promise, but it was not maintained after the first few days, then they went back to the doldrums. On one or two days, exceptionally strong signals from some West Coast W/VE stations came through, so there is some improvement in the band from that quarter on 14 Mc.

The band survey, with stations worked * and times in z time, shows—

3.5 Mc.: **2AWU** struck the jackpot on this band by working CE3AG on the 22nd at 1200z. **7RK** thinks this band shows promise as he has heard a number of stations, even WNs which shows power is not essential. Ray says if the DX gang used the band, they would work plenty. **4QL** only heard W6ZAT.

7 Mc.: This band showed some improvement up here in the mornings, but was not maintained. **4XJ** found that he could hear W, VE, KH6 and KL7 OK, especially round 1300z. **7RK** reports the band varying from fair to poor. **4QL** heard very little of good strength, even VK way down. 4EL for example, 20 miles distant being almost unreadable, but lists HH2LD*, HH2FL, PY6DU, ZS4CZ*, VK9GM*, CN8FF, KP4CC, VR4AF*. At long last a VK6 took up his pen, 6LU to wit, who operates this band. Lou is very perturbed at the amount of Commercial QRM on the band (so am I after looking at the Berne list). Just the same, he lists KG6FAA*, VU5AB*, KC6QY*, CR9AF, CO6PP*. One morn he worked seven Gs, one GW and GI in a row.

14 Mc.: Some of the East Coast gang seem to be able to work Europe in the early mornings, but a beam seems to be necessary. Up here, they have been very weak, if at all, and the band is useless for 20 out of the 24 hours, which is a far cry from 14 Mc. as we used to think of it. **ZL2FA** reports the same over there. **2OW** has increased his tally to 99 by a QSO with KC6DX. **4XJ** found the afternoons best and lists CO2OZ*, VR1B*, TI2CHV*, ZS1V*, XE2KW. Can hear the Europeans and works the odd one in the mornings. On 14th heard three ZS and KH6 in a four-way. **5HI** did say he hooked ZD2HAH and FB8BE, the latter at 0330z, and heard VQ1MD at 2330z. **4QL** at last completed his W.A.S. and now waits the arrival of four QSLs. Lists VR7AB. ZS5CZ at 0630z, FR7ZA, VK1EM, HZ1MY, KG4AF*, VR4AF*, EA8BC, HH3L, EK1FM, DJ1BZ (QTH given as Stuttgart), and VP1AA*. **7RK** found some hefty signals also from W/VE in the afternoons, but nights useless. Ray tried to find EA9DC but no luck. He lists FA8IH, CO2OE*, EA6AM, ZS1JA. **9XK**, who shortly returns to VK3 again, is chasing Vermont to complete his W.A.S. Russ lists PK7XX*, VP2AD*, VP1AA*, his total being now 125.

21 Mc.: This band has been disappointing to most, and not much DX has been heard. **2AWU** worked KZ5AW and heard ZE3JJ. **3NM** disappointed he missed out when some VK3s worked ZE3JJ, but has now amassed the total of 194 on all bands. **4XJ** showed no results for his visits to the band. **4QL**: KZ5AW* and heard a few Ws. **7RK** found W and VE the only ones in the way of DX.

28 Mc.: 4XJ and 7RK found the band hardly worth while looking at. The Ws say that many of the confirmed 28 Mc. stations are appearing on 14 Mc. over there.

The QSL position is like the bands, not much to report. **7RK** a blank, **9XK** VP9OO, **4QL** EK1AO, ZD2DCP, ZE3JP, VK1YG and SU1GO.

The gen section depends on how much space the Editor makes available as there are some general interest items this month. Firstly will be the subject matter of a letter from ZE3JJ to the VK3 Division, reference 21 Mc. As the letter was written in April, some of the letter is past history. As I mentioned in a recent issue of these notes, 21 Mc. had been available to South Africa for some years, but activity of the ZE stations waned when there was no others to QSO. However, the news of the release on 1st May, started the ball rolling again. During 1949-50, ZE1JB and ZE2KH conducted tests on the band, and effected cross band contacts with most continents, but interest then lapsed somewhat. (4EL heard ZE on 21 Mc. months and months before its release to VK). ZE3JJ, using a vert. zepp, on 19th April worked OD5AB who reported he had worked OQ5, VS7 and PY. A QSO with MI3 and PY then followed, PY1AQT reporting much activity on 21 Mc. ZE3JJ says he was hearing Radio Australia excellently on the freq. of 21.54 at 0500z, and the BBC on 21.47 Mc. 1200z-1700z. ZE stations active at present are ZE2KH, ZE2JK and ZE3JJ. As mentioned above, since the release of the band ZE3JJ has worked VK3.

Whilst on 21 Mc., I was told that the band was being released to the Gs on 1st July. W stations are in an unhappy frame of mind re this band, as the F.C.C. allocation of the band, at present intention, is phone on the high and low ends, with Novice and teletype operation in the present agreed c.w. part of the band. This allocation would certainly make things somewhat difficult.

W stations have told me this month there is increased activity in ZP these days, quite a few now being on the 14 Mc. band. ZS2MI is again active for a short period. I received a letter from Eimac Tubes, saying that they had the log of 4W1AC, and noted I was one of the chosen few in the 38 QSOs that station had. They are at a loss to understand the small number of contacts, seeing that 4W1AC was using high power, so were interested in details of my rig. Once again, it has been proved low power and a simple antenna can go places.

VR7AB is causing much discussion, especially amongst the Ws, as to his being legit. or otherwise. Many of them who miss out, jam the freq. saying he is foney. If he is, he certainly tells a good story, part of which is, that he is an ex-GM who was operating v.h.f. until a couple of years ago and has few clues on DX-ing. So much so, that he does not realise how "hot" he is and will rag chew for up to an hour with one station, much to the chagrin of the impatient. He says he has had great difficulty getting a license, the Post Master being most unco-operative, so eventually had a license issued by the British Authorities and now the P.M. wont speak to him. VR1B is reported to have cabled Nauru and received a negative reply, but, remember the P.M.!

VR4AF (VK2QZ) will be back in Sydney long before you read these notes. Bob had just over 250 QSOs with this call. The KC6 prefix is getting some DXers boxed a bit, so here is the score, right from the horse's mouth, KC6QY. The islands of Yap and Palau are one country, whilst Ponape and Truk are classified as another. VK9GM should not be passed over as he is on from Norfolk Island.

Well that winds it up and 6KU gives us the thought for the month as "There is a lot of undeveloped territory right under your hat."

— • • • —

* Flt./Lt. F. T. Hine, No. 10 (G.R.) Squadron, R.A.A.F., Townsville, Queensland.

FIFTY Mc. AND ABOVE

THE VK5 INTRA-STATE V.H.F. CONTEST

VK5RO showed commendable enterprise in piling up a score of 3973 points in the recent V.h.f. Contest. He used the following bands: 50, 144 and 288 Mc., working 29 individual stations. To Colin goes our heartiest congratulations, to say nothing of a QQE06/40 which was generously donated by Philips Industries and we feel that the best possible use will be made of it.

While a considerable number of stations participated in the Contest, the return of logs was to say the least disappointing, although when the winner is presented with the tube at the next meeting the gang will be the disappointed ones. It is felt that the Contest was not without value, however, because several appreciative comments were received from enthusiastic builders of v.h.f. gear, who said, "At least we knew that there would be signals on the bands each Sunday evening."

The only country stations to appear were 5BC of Renmark, 5XL of Clare, and 5AX of Gawler. It is hoped that next year's Contest will see more country stations active and we feel sure that when the tube is examined by all and sundry at the meeting, quite a number of those who did not bother to submit logs will be "kicking themselves."

The receiving section of the Contest was won by Max Hilliard, of Salisbury, with Joe McAllister (now 5JO) in second place. The winner of this section will receive a pair of 6J6s, donated by our staunch friends, Gerard and Goodman.

Quite a number of listeners submitted logs but were ineligible because they did not include a description of the equipment in use as requested by the rules. All in all, the VK5 Division's first attempt at an Intra-State V.h.f. Contest was a definite success and all the credit must go to the v.h.f. representative on the VK5 Council, 5JD, Jack to you, who handled the whole matter from start to finish. Nice work Jack, take a bow.—5PS.

SOUTH AUSTRALIA

Things are fairly quiet with most activity being on 144 and 288 Mc. A lot of re-building is taking place and with a few new calls activity should be high next summer. It is reported some chaps are trying out the Birdcage type of antenna on 288 Mc. and finding the gain very useful. Reg. Davies, a well known ex-VK5 v.h.f. man, was on a visit to Adelaide recently and was accorded a hearty welcome by the boys at an evening held at 5GF's place.—5KL.

AMATEUR CALL SIGNS

FOR MONTH OF MARCH, 1952

ADDITIONS

VK—

New South Wales

2HX—T. L. Somers, 2 Ingham Av., Five Dock.
2IG—L. J. Bone, 14 Railway Av., Eastwood.
2VX—V. E. Stanley, O.T.C. Radio Station, Carlingford.
2PO—R. B. Reeks, 7 Wheeler St., Carlton.
2ATO—J. D. Thornthwaite, 33 Collingwood St., Drummoyne.

Victoria

3ME—E. C. Cameron, c/o. 3LK, Lubeck.
3ARC—R.A.A.F. College Radio Club, R.A.A.F. College, Point Cook.

Queensland

4SS—A. Shawsmith, 54 Daventry St., West End, Brisbane.
4TL—D. N. Robinson, 47 Dunnellan St., Greenslopes, Brisbane.

South Australia

5OC—L. O. C. Baker, 7 Lillian St., Prospect.
5SD—R. S. Amos, 76 Oval Av., Woodville Sth.

Western Australia

6TR—T. W. Reed, 17 Auckland St., Nth. Perth.

Tasmania

7BC—B. D. Clark, Short St., Lindisfarne.

Territories

1AE—G. Major, Macquarie Island.

ALTERATIONS

VK—

New South Wales

2BA—17 Scales Pde., Balgawlah.
2FI—"Windward," Buena Vista Av., Wentworth Falls.
2GL—c/o. Quantas Airways, Operations Dept., Mascot.
2LY—"Notrella," Rodova St., Katoomba.
2OX—9 Glamis St., Kingsgrove.
2QY—36 Cliffbrook Pde., Clovelly.
2ABH—Lot 65, Horton St., Bass Hills.
2ADA—28 Cathcart St., Fairfield.

Victoria

3BP—Howlong Loose Bag, Rutherglen.
3GB—755 Burwood Rd., Hawthorn, E.3.
3GV—Ruda St., Doncaster.
3HD—9 Ackaringa Cres., Black Rock, S.9.
3PD—Cr. Henty & Campbell Sts., Barwon Heads.
3RA—71 Tennyson St., Elwood.
3RF—93 Latrobe St., Warragul.
3WK—35 Lubrano St., East Brighton.
3AAB—37 Gordon Gr., Northcote, N.16.
3AAK—"Cooinda," May Rd., Syndal, via Glen Waverley.
3ATD—c/o. Station 3BO, Bendigo.

Queensland

4FM—41 Little St., Cairns.
4KR—Eimeo Rd., North Mackay.
4WI—c/o. A. Harris, 15 Turner St., Windsor, Brisbane.
4XW—10 Ashton St., Camp Hill.

South Australia

5MK—55 Lynton Av., Millswood Estate.
5MN—17 Railway Ter., Kadina.
5MP—2 Dew St., Kent Town.

Western Australia

6CN—Moore St., Killerberrin.
6FW—117 Hamilton St., Bassendean.
6OY—10 Kipling St., Narrogen.
6RB—152 McDonald St., Joondanna Heights, Mount Hawthorn.
6RT—School House, Bindi Bindi.
6UF—c/o. D.E.S., W.A. Govt. Rlys., Geraldton.
6VK—R.A.A.F. Station, Pearce.

Tasmania

7RA—Lenna St., Rosebay, Lindisfarne.

Territories

1RF—Heard Island.
1RG—Macquarie Island.

DELETIONS

N.S.W.: VKs 2AFL, 2ATL (now operating under VK2HX).
Vic.: VKs 3ADE, 3AFL (now operating under VK2LY).
Tas.: VK7JB.

FOR MONTH OF APRIL, 1952

ADDITIONS

VK—

New South Wales

2LJ—L. J. Coupland, 135 Morgan St., Beverley Hills, Sydney.
2ATF—J. S. R. Price, R.A.A.F. Station, Richmond.
2AUA—M. C. Carpenter, 3 Heathcote St., Rockdale.

Victoria

3ALZ—I. F. Berwick, "Courtney Park," Murchison.

South Australia

5OP—P. S. Roper, 27 Miles Ter., Nth. Adelaide.

Western Australia

6MR—H. T. Mulder, Station: Aboard M.V. "Sabina;" Postal: 4 Tyrell St., Nedlands.

Territories

1EM—E. L. Macklin, Macquarie Island.

ALTERATIONS

VK—

New South Wales

2AO—22 Targo Rd., Kogarah.
2HF—32 Wattle St., Killara.
2LJ—12 Anzac St., Canterbury.
2MZ—44 Linthorn Av., Croydon Park.
2TZ—36 Kardinia Rd., Clifton Gardens.
2UM—4a Culdees Rd., Burwood.
2VH—114 Gipps St., Wollongong.
2XP—Girrahween, R.M.B. 331, Dalton.
2ZH—81 Beechworth Rd., Pymble.
2AAG—29 Meakin St., Merrylands.
2ABI—Lot 61, Cabbagetree Lane, Fairymeadow.
2AJE—88 Gannons Rd., Caringbah.
2AKK—27 Cecil St., Ryde.

Victoria

3DV—82 Scott St., Dandenong.
3KH—28 Nerissa St., Burwood.
3SF—376 Fortescue Av., Seaford.
3ABP—28 Lewisham Rd., Windsor.
3AGP—39 Sixth St., Parkdale.
3AGX—40 Birdwood Av., Dandenong.
3AJI—165 Glen Eira Rd., East St. Kilda.
3AOL—54 Bellerine St., Geelong.

Queensland

4GW—168a George St., West Bundaberg.
4LK—Anne St., Charters Towers.
4LT—Fitzroy St., Nanango.

South Australia

5AC—15 Hughes St., Woodville.
5DG—140 Raglan St., Harcourt Gardens.
5VC—Cr. Montacute & Moorland Rds., Hectorville, Adelaide.

Western Australia

6AR—9 Elizabeth St., Kalgoorlie.
6CM—30 McDonald St., Kalgoorlie.

Tasmania

7WI—27 Bishop St., New Town.

Territories

9RO—S.D.A. Mission, Box 11 P.O., Lae, T.N.G.

DELETIONS

Vic.: VKs 3KF, 3VC.
Qld.: VK4KM.
S.A.: VK5EK (now operating under VK2ATF).
Territories: VK1KJ.

Television Questions and Answers

Questions on television, submitted to VK3ADA, after being answered by post, will be anonymously published and again answered here, as space permits, to benefit other readers.

Q.—Ref. Part ii. As a photographer, I noticed that the design of the Emitron camera does not permit the lens to be placed close to target, as shown in Fig. 1. Apparently this camera can use only lenses of large focal length, with the inherent disadvantages of same. Surely all television cameras don't suffer this limitation. How can it be overcome?

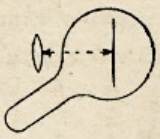

Fig. 1.

A.—You are quite right. The disadvantage you mention is due to the functions of photo-cathode and scanning target being combined on the one surface, and is overcome in later types of camera tube by separating these two functions. Perhaps the simplest of these tubes is the Super Emitron, outlined in Fig. 2.

In this tube, the photo-cathode consists of a small sheet of transparent mica, or glass, coated with photo-emissive material and placed against a flat "window" in the tube, so that the optical lens can be placed as close as required.

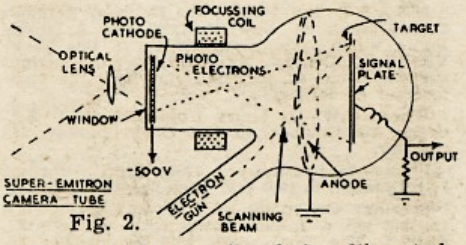

Fig. 2.

Photo electrons, after being liberated from this cathode (by light from the scene) are attracted by the anode towards the target, on to which they are focussed by the coil, just as the optical lens focusses the light rays on to the cathode.

Upon striking the target these electrons dislodge others from the target's surface, so that the "charges" produced by the light are "transferred" from the photo-cathode to the scanning target, from which the output is obtained just as in the Emitron tube (which, by the way, is not obsolete. It still has some advantages).

The Super Emitron uses a method of amplification quite different from those with which we are familiar. As each photo-electron strikes the target at high velocity, it dislodges not one, but several electrons so that the charges on the target are greater than those on the cathode. In other words, the signal is amplified, making the camera far more sensitive than the Emitron.

This method of amplification, called "electron multiplication," is used quite extensively in television cameras, but for simplicity's sake, the subject has been purposely omitted from this series, since it does not concern the Ham's angle on television.

* * * *

Q.—I've read that when an object moves rapidly across a television screen, it appears distorted in shape. Why?

A.—Consider the square object in Fig. 3 moving from left to right. Suppose that when the camera commences scanning its top line, it is in position ABCD, but by the time its base line is scanned, it has moved to position HGFE. Now, on the receiver screen the top line will be reproduced at position AB, and the base line at EF, so that instead of being square, the object will assume the "rhombic" shape ABFE.

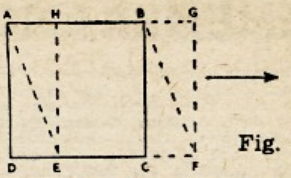

Fig. 3.

This point has often been raised in support of 60 field/sec. systems, but in reality, even in a 50 field/sec. system, it is far from troublesome; in fact you probably would not notice it if you had not been told.

The distance DE is that travelled by the object (on the screen) in about one-hundredth part of a second or less, and for this to be appreciable, the object would have to be moving so fast that its shape would not be clearly discernible in any case.

REMEMBRANCE DAY CONTEST, 1952

The Remembrance Day Contest is an Australian annual contest to perpetuate the memory of those Australian Amateurs who gave their lives for their country during World War II. It is held on the week-end nearest to 15th August in each year, the date on which the hostilities ceased in the S.W.P.A.

A handsome Perpetual Trophy is awarded annually for competition between States, inscribed with the names of those who made the supreme sacrifice, and so perpetuating their memory throughout Amateur Radio in Australia. The name of the winning State each year is also inscribed on the Trophy.

RULES

1. The Contest will commence at 1800 hours E.A.S.T. on 16th August and continue through until 1759 hours on the 17th August.

2. The Contest is open to all Australian Amateurs, but only members of the W.I.A. are eligible for the awards.

3. The Contest is an open event—c.w., phone, or a combination of both may be used.

4. The Contest is an Interstate Contest, and Amateurs in each State will endeavour to contact Amateurs in all other States.

5. A station may be operated by more than one operator under his own call sign, provided each operator enters a separate log.

6. All existing Amateur bands may be used, and all transmissions must conform with the Regulations as laid down in the P.M.G's. "Handbook for the Guidance of Operators of Amateur Wireless Stations." Any breaches of these will lead to the disqualification of the operator concerned.

7. The arrangements of schedules for contacts on other bands will not be permitted.

8. All stations entering the Contest will call "CQ RD" if using c.w., and "CQ Remembrance Day" if using phone.

9. A State competing for the Trophy must submit a minimum of six (6) logs from financial members before becoming eligible for contesting the Trophy.

10. Only one contact per station per band is permitted.

11. Serial numbers to be exchanged during the Contest will be as follows:—

(a) For c.w. the first three figures will be the RST (telegraphy) report, followed by the serial number of the contact commencing with any number between 001 and 100 for the first contact and increasing in value by one (1) for each successive contact. If any contestant reaches 999 he will then commence 001 and continue 002, 003, 004, etc.

(b) For phone the first two figures will be the RS (telephony) report, followed by the serial number of the contact commencing with any number between 001 and 100 for the first contact and increasing in value by one (1) for each successive contact. If any contestant reaches 999, he will then commence 001 and continue 002, 003, 004, etc.

A complete exchange of serial numbers must take place before any points may be claimed for the contact.

SCORING

12. In order that an equitable distribution of points for States with a large number of contestants compared with a State with fewer contestants may be determined, a sliding scale of points has been allotted as shown in the scoring table appended.

13. In addition to the points in the scoring table that may be scored by a contestant, a bonus of 25 points may be added to the total score for each State worked on 50 Mc. or above.

LOGS

14. The log submitted must show in the following order: Date, time, band, emission, call sign, RST/No. sent, RST/No. received, points claimed. No log will be accepted unless laid out in this order!

15. A statement signed by the operator must be attached at the conclusion of the log stating that the Regulations (Rule 6) and these Rules have been observed. Any logs departing from this form will automatically be disqualified.

16. All logs must be forwarded through the Contestant's Divisional Council (for membership checking) to reach the Federal Contest Committee, Box 1734, G.P.O., Sydney, on or before 12th September, 1952.

AWARDS

17. Attractive certificates will be awarded to the first, second and third highest in each State; there will be no outright winner for Australia. Where a large number of logs are received from any one State, further certificates may be awarded at the discretion of the Contest Committee.

TROPHY

18. The State to which the Perpetual Trophy will be awarded shall be determined as follows: To the average of the top six (6) logs shall be added a bonus arrived at by multiplying this average by the ratio of valid logs submitted by that State to the total of Amateur Licensees in the Division at the time of the Contest.

Example: Total points equals—

$$\text{Average Score} \left(1 \text{ plus } \frac{\text{Number of Logs}}{\text{Number of Licensees in Division}} \right)$$

19. The logs which will be accepted for the multiplier under Rule 18 shall show at least five (5) contacts in the Contest.

20. The Trophy shall be forwarded to the winning State in its container and will be held by that State for a period of twelve (12) months when the winner for the succeeding year is determined.

21. The Federal Contest Committee shall be the sole adjudicators and their ruling will be binding in the case of any dispute.

SCORING TABLE

From \ To	VK2	VK3	VK4	VK5	VK6	VK7	VK9	Total
VK2	–	1	2	3	5	4	6	21
VK3	1	–	3	2	5	4	6	21
VK4	1	2	–	3	6	5	4	21
VK5	2	1	3	–	5	4	6	21
VK6	1	2	4	3	–	5	6	21
VK7	2	1	4	3	5	–	6	21
VK9	1	2	3	4	5	6	–	21

NOTE.—Read the table from left to right for points for the various States.

Examples:—

A VK2 scores 1 point for a VK3 contact.
2 " " " VK4 "
3 " " " VK5 "

A VK6 scores 1 " " " VK2 "
2 " " " VK3 "
4 " " " VK4 "

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Rules for Overseas Stations in VK-ZL DX Contest, 1952

N.Z.A.R.T. and W.I.A., the National Amateur Organisations in New Zealand and Australia, invite world wide participation in this year's VK-ZL DX Contest. **Rules for Overseas Stations** are the same as for 1951 and may be summarised as follows:—

When: C.W.—24 hours from 1200 GMT, Saturday, 4th October, to 1200 GMT, Sunday, 5th October.

Phone—24 hours from 1200 GMT, Saturday, 11th October, to 1200 GMT Sunday, 12th October.

Scoring: One point will be scored for each contact on a specific band with any VK-ZL district. The final score will be derived by multiplying the total contacts on all bands by the total number of VK-ZL districts worked on all bands. VK-ZL districts are: ZL1, 2, 3, and 4; VK1, 2, 3, 4, 5, 6, 7, and 9.

Serial Numbers will consist of six figures (five figures for phone), made up of the RST report plus three figures which should commence with 001 and increase by one for each successive QSO, i.e., 002, 003, 004, etc.

Logs: (a) Must show in this order: Date, time in GMT, call sign of station contacted, serial sent, serial received, band. Please underline each new VK-ZL district when contacted. PLEASE use a separate log sheet for each band.

(b) Summary Sheet to show: Call sign, name and address (please in block letters), details of rig, **Total score** by showing total of districts worked on all bands and total contacts on all bands. (Districts x Contacts equals Total Score), and signed declaration that rules have been observed.

Awards: Attractive Certificates to the highest scorer in each Country (each call area in the U.S.A.). Other Certificates will be awarded depending upon the number of logs received from each Country.

Logs should be posted to reach N.Z.A.R.T., Box 489, Wellington, N.Z., on or before 23rd January, 1953. (Mark envelope VK-ZL Test.)

Listeners' Section as before. To count for points, a VK or ZL station must be heard in a Contest QSO and the following noted in log: Date, time in GMT, call of station heard, call of station being called, RS(T) of station heard, serial number sent by the calling station, band. Scoring is on same basis as for transmitting section, and log should be similarly made out.

FEDERAL, QSL, and DIVISIONAL NOTES

FEDERAL

NEW BAND IN NEW ZEALAND

Commencing at 0001 New Zealand time on the 1st July last New Zealand Amateurs holding high frequency permits (ordinary or special) were licensed to use the frequencies 26,960 to 27,230 Kc. in the 11 meter band for A1 and A3 transmissions.

Additionally, from the same time and date A3 transmissions were permitted (by the above class of permit holders) in the portion 21,101 to 21,450 Kc. of the new 21 Mc. band. Telephony will not be permitted on the frequencies 21,000 to 21,100 Kc. which is reserved for A1 transmissions only.

ZL LOCAL AWARD IN VK ROSS HULL V.H.F. CONTEST

Over the past two years the ZL activity in the Australian "Ross Hull V.H.F. Memorial Contest" has been ever increasing. The N.Z. A.R.T. asked the W.I.A. if there was any objection to them making a local award for the highest ZL scorer in the Contest, this, they considered, being a step towards popularising the v.h.f. bands in New Zealand. The trophy will be known as the H. P. V. Brown Cup.

WHAT OF 21 Mc.

Much speculation is rife on whether the 21 Mc. band is going to be any good, and therefore, whether we should spend time and money building a final and a beam for a band that is worse, if anything could be, than the 10 and 20 meter bands have been this last two years.

One thing that does assist to make a band "a good band" is the number of stations operating in it, and in this respect the 21 Mc. band is sure to improve with an influx of signals to be heard.

However, one bright spot on the horizon is the upward curve of the sunspot cycle, which undoubtedly will cause a rapid improvement in band conditions, when the 21 Mc. band should prove to be the DX band combining the characteristics of the 14 and 28 Mc. bands.

So don't adopt the attitude that 21 Mc. will never be any good and that therefore it is useless wasting time and money on equipment to use in it, for there is a heyday not so very far ahead when Amateur bands will come into their own and those who were prepared will enjoy an era of operating such as they never dreamed of.

CIVIL DEFENCE

With wonderful prospects ahead for Amateurs to organise themselves into emergency networks for civil defence and other emergencies, now is the time to think about really making an effort to construct equipment for mobile/portable use—equipment that can also serve as a standby rig for field days and when on holidays.

Those who are interested are referred to the American magazine "CQ," May, 1952, which is a special mobile issue, and gives many pages of interesting ideas, which, even if not followed exactly to the circuits published, due to unavailability of some components, at least serves as an excellent basis on which to commence designing your equipment. Articles on the conversion for mobile use of the now famous Command transmitters and receivers merits the interest of all Australian Amateurs because everyone seems to have obtained at least one unit of this range of equipment.

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FEDERAL QSL BUREAU

RAY JONES, VK3RJ, MANAGER

The new and permanent address for the QSL Bureau of the Singapore Amateur Radio Transmitters' Society is Box 176, Singapore 1, Malaya. The Manager is VS1DU.

Bill Storer, ex-VK1BS, is still busy on the back log of QSLs. He intends doing battle with ex-VK1VU, saying, "Maybe he will talk to another VK1."

Jim Wilson, VK7JT, writing from Penguin, Tasmania, states he has "temporarily" forsaken radio during the past 18 months. Jim finds plenty to interest him in his present occupation in the analytical field.

June, 1952, was a post-war "low" in the QSL line, and is probably a reflex of the poor conditions persisting on the International DX bands.

W.I.A. ACTIVITIES CALENDAR

August 16 to 17: Remembrance Day Contest.
October 4-5: VK-ZL DX Contest (all bands), C.W. Section.
October 11-12: VK-ZL DX Contest (all bands), Phone Section.
December 6-7: European DX Contest (all bands), C.W. Section.
December 13-14: European DX Contest (all bands), Phone Section.

NEW SOUTH WALES

The June meeting of the N.S.W. Division was held at Science House on Friday, 27th, under the chairmanship of the President, John Moyle. After disposing of the minutes and correspondence, a lecture was presented by Mr. Angus Robertson on Ionospheric Prediction Charts. In this he was ably assisted by Mr. Joe Reed who had presented a talk on somewhat similar lines a couple of years before. Joe turned on a comprehensive set of lantern slides and did the honours with the lantern.

The Division needed no introduction to the lecturer who has regaled us from time to time on various somewhat abstruse subjects in a lucid and efficient manner. The mysteries of ionospheric charts, their evolution, and production were laid bare and their uses made as clear as daylight. The reason for the lecture arose from the previous meeting when the lamentable lack of co-operation from Amateurs in general to the appeals from the C.S.I.R.O. for confirmation of the accuracy of the charts as published monthly in "Amateur Radio." It was pointed out how much toil went into the preparation of those charts (we now know how much!) and that it was up to all the DX hounds to forward the results of their observations to the C.S.I.R.O.

It has been decided to make a real effort to show that Australian Amateurs can and will help in this matter of scientific importance and 2XU has been appointed as co-ordinator. An appeal is hereby made to all Amateurs reached by this magazine to volunteer their assistance by dropping Wal a note or a card. Those who are unable to undertake organised assistance can still help by letting Wal know from time to time of any unusual path opening, of "threshold" conditions on any band at any given times, and of times at which a DX path is heard to open or fade out. Even an occasional observation of this kind will be of value when multiplied by those received from the other fellow!

After the lecture Angus showed us some colour slides of Norfolk Island made by himself and a colleague, and very good they were!

There was not much time left for general business, which was unfortunate, as notice had been given of a motion to suspend all privileges of unfinancial members. Some keen discussion on the motion took place, but I, for one, felt that a little more time spent on it would have brought out a lot of points which were not covered. The motion was passed but a legal difficulty has momentarily spragged the action. By the time this appears in print it is pretty certain that some drastic action will be taking its course. It always beats me why some chaps, with the best intentions in the world of paying their subscriptions, eventually seem to procrastinate until it is too late! It is hoped that only the no-hopers will be scrubbed on this occasion.

In the remaining five minutes at our disposal, the remaining agenda items, ratification of which had been held up by the non-receipt of the Convention minutes from F.E. in time for the May meeting were bulldozed through.—2GW.

NORTH SHORE ZONE

Very little activity from this area during the month and no notes whatever from the boys. Conditions have not been good, with high winds, cold weather, and large lumps of silence on all bands, when time found to listen. Hear Dave 2EO is re-vamping rig. Harold 2AQP still building beam. Vic 2AEN has at last cleared up trouble in his rig when last contacted with nice drop of c.w. and f.b. phone, congrats Vic. John 2ANF heard on 40 with usual f.b. signal. News of activity will still be appreciated gentlemen!

ST. GEORGE ZONE

Until recently I have been unable to go around and see the local boys, nor have I been able to hear them on the air. Believe me, I have been busy, and now I can sit back and rest (before I find more to do). I went and visited John 2XW and he was very surprised to see me, he was wondering if I had left the State. He tells me that 20 has been very dead lately, and seeing that his mast collapsed recently, he has not been heard of as much as yore. Sid 2SW I hear is back, and I will drop in and see him very soon and let him tell me all about his travels, and see if he knows anything interesting. I called on Cedric 2ASK, but was told that he was in Japan. John 2JJ and Frank 2ABA, I must go and see if they are still around. Switched on the gear to see if it still went after the holiday it has had, but no fuses blew, and had a quick look around the band, to see if I could make any contact. Had everything ready to go when visitors arrived, and had to play host, anyhow what I did hear on the band was not much so I don't think I missed much. During the next month I will also visit the v.h.f. boys and maybe next month I will have more notes from this area.

SOUTH WESTERN ZONE

Les 2PI heard on 80 mx. Jim 2TC also active on 40 and 80. 2APP heard on 40 and 80 mx, Peter in the process of constructing a g.d.o. 2AKF also active on 40. Jack 2OY and Les 2AEL both heard on 40 mx. Fred 2AJI heard on 80 mx putting out a good signal. 2PL making alterations to house, and busy rounding up prospective Hams at Griffith, Stewart is the proud father of a new son, congrats OM.

2OW now has worked 98 countries, 75 confirmed, nice going Gordon, also informs that he worked a KL7 on 20 mx and received his card seven days later. Geoff 2BQ heard on 80 mx. 2APZ active on 40 and is really getting contacts with his 15 watts, the AR8 Rx should be better than your old super, Ray. Not much progress has been made with the South Western Zone hook-up at 0930 on Sunday mornings as conditions seem haywire at that time. Some of the chaps have suggested 80 mx for the hook-up, it's worth a try. If you have not been in the zone ragchew, how about it fellows?

COALFIELDS AND LAKES ZONE

With the coming of winter and the prevailing conditions, the gang seems to find the call of the fireside stronger than that of the Ham shack. In addition, some of the boys are busy with the soldering iron modifying gear during the winter lull. Ken 2ANU has been busy revamping the low frequency Rx to suit his 32 volt supply. Geoff 2VU re-appeared on 50 Mc. with his re-built rig and has commenced operations on his 2 mx gear. Alex 2JZ still chases the elusive ones on 14 Mc. Harry 2YL has been on the air again for odd contacts and even stoked up the rig on 21 Mc. Main activity at 2ADT's shack has been in connection with a QRP rig for 80 and 40. Bob 2KF has kept Kurri on the map with contacts on 7 and 14 Mc., but Max 2KZ seems to have deserted 10 mx, maybe I don't listen at the right time.

Major 2RU is still working regularly on 2 and 6 mx. Charlie 2ARV may be heard on 40 mx at the week-ends. Cecil 2KR works on 40 and 2. He now has a 4 over 4 beam on 2 and is planning an 829 final. John 2GA has completed his 829 final for 2 and is doing battle with a xtal controlled converter. He also sports a 4 over 4 beam. Harry 2LX is occasionally heard on 80 and 40 and is watching 21 Mc. in case it breaks open. In spite of the violent westerlies, I have not heard of a single beam tragedy in the zone. May they continue to withstand the elements in the days to come.

HUNTER BRANCH

Your zone officer is very grateful to Harold 2AHA for compiling these notes last month and enabling me to have a very nice holiday. Must have been a change for you chaps having something decent to read! Thanks a lot Harold. President 2CS gave an impromptu lecture on the problems that are associated with building v.f.o's. and matching antenna feeders at the June meeting. The concise manner in which Lionel "delivered the goods," combined with the discussion which followed, resulted in those present voting it one of the most interesting evenings yet. The President advises that at present he is actively engaged in correspondence with the Div. President expressing our disgust at lack of any definite outcome from the Federal Convention.

Due to kind help of 2XY, our veteran Ham, Edgar 2MR, is now putting out a nicely mod-

ulated sig on 20. Neil spent most of his holidays rejuvenating the gas buggy but now very active on 144. 2OT hopes to hit 144 soon and Max rehashing 10 mx converter for Rx—will use 832 driving pair 24Gs in Tx. Harry 2AFX listening on 144 with super-regen and should hit band soon with pair 7193s. At Mayfield 2ANA thinks he'll cultivate a soprano voice and Norm plans a 20 mx rotary dipole to escape 40 mx commercials. The 6 x 4 inch portable is doing a grand job on 20 for Bill 2AXM. When will that 813 final be ready OM? Jim 2ZC recently chased an elusive VR7 whose sigs appeared to be coming in wrong direction. Success at last, but it turned out to be a pirate. John 2XQ still holds the fort with "Old Gentlemen" on 80 mx. Doug 2ADS is our most regular 40 mx man on week days. From Toronto we learn that Jack 2KQ is enjoying long service leave. 2CI recently had marathon QSO with a ZL on 80—S9 both ways. Ken 2KG is very QRL with work these days. Recently returned from N/C, John 2DZ is planning some improvements on his 20 mx beam. Ron 2AAI been on 20 occasionally.

Sorry to report that our old pal, Ernie 2FP, not well at time of writing. The locals could hardly believe it when they heard Ernie QSO-ing 2OT on 40!! Tom 2PQ is sticking to 80 and 40 these days. 2nd op. harmonic seems to be keeping 2AMM off air completely; what about it Bill? Norm 2YS is making up for lost time in his QSOs with 2ZW. Secretary 2SF has just hooked some real DX, a VR4. 2XT enjoying well earned holiday, Bill motoring to VK4 with XYL and 2nd op. Bert 2TE been inactive due night work. We expect Bill 2PJ to be on 144 soon. Our sympathy to Harry 2AFA whose father passed away recently. The letter from our Western pals is still receiving strong support in this zone.

Notice of Meeting. The August meeting will be held at the Technical College, Tighes Hill, on Friday, 8th. The Committee is working on a plan to arrange future lectures, etc., well in advance. They are doing their best for you, so help them if you can.

NORTH COAST AND TABLELANDS ZONE

Conditions this month have not lent themselves to the gleaning of information on the 40 mx band as majority of N/C stations cannot be heard with any regularity at any location. 80 mx of course has been excellent for evening ragchews but have only a limited time available for "reading the mail" during that period. 50 and 28 Mc. activity is practically non-existent except for 2LH and 2ADE who have a permanent circuit on 50 Mc. 2PA and 2AHH are now active on 21 Mc., but only phone activity is among VKs, the DX being all on c.w. On 14 Mc., 2DX can be heard working anything that appears on the band.

Peter 2PA recently visited Newcastle and returned home to Port Macquarie to find that the top half of his mast had blown down and slightly damaged the back of his house. Fortunately the major loss was only a piece of guttering. Charlie 2ARV visited 2AHH at Kempsey and proceeded north via Grafton to visit Alan 2ASO at Kyogle, whilst Len 2LR departed from Kyogle to visit his wife in hospital in Brisbane, spending a week-end with Tom 4PD. Keith 2GI has been active on 80 and worked VR2BK on 40 mx during one afternoon, the VR only using 6 watts. 2AWH has been operating portable at Lawrence (near Grafton). He was in strife for a while with modulation problems, but is now putting out a nice signal. 2NY and 2XO are showing an interest in tape recorders, whilst Norm 2RK is interested in railway engines running on unfenced tracks. They have got them near Sydney too, Norm, at Richmond. 2WQ can be heard once again on 40 mx. If any of the N/C boys are interested in the ionospheric prediction charts published in "A.R.," a note to the W.I.A. now and then regarding actual conditions would be appreciated.

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VICTORIA

SOUTH WESTERN ZONE

All members of this zone would like to offer our sympathies to Bill 3BU and his relations on the passing of his father, a man who will be remembered by us all as a great advocate of Amateur Radio. Our sympathies go also to Jack 3JA who received the sad news that his brother was killed in an accident in Melbourne.

Well it looks as though our flood troubles are practically over and by this time many of the country boys will be busily tidying up the mess left by the flood waters. I don't think that they have affected Kevin 3AKR as every time we hear Kevin of a Sunday morning he has just arisen and when on the air is usually in the process of having a shave. John 3AGD now boasts a super Rx as he had Jeff 3APD staying up there with him, and they practically re-built the BC348, much to John's satisfaction.

Neil 3HG is active and can be heard almost any day at dinner time and is going into the adventures of remote control, wishing to turn his diesel generator on and off by remote control buttons. 3AGV has inspired activity on 144 Mc. During the last Convention up here at Geelong, Gordon had remarkable success with his portable 144 gear; with his car built around Tx and Rx, from Barwon Heads he contacted several stations receiving 5 x 9 from Ballarat, and all members present were amazed at the performance of the gear. The outcome is that now 3AOL, 3ALP, 3AOP and 3APK are now ready to get on 144 Mc.

EASTERN ZONE

Main topic this month is the very good job done by 3SS, 3IO, and 3SG during the June floods in this area. When telephone lines went out between Neury and Maffra, 3SG, 3SS and his junior op., David, handled large quantities of traffic for the P.M.G., for two days, until the technicians were able to repair the damage. Lindsay 3IO, with his trusty Type 3, series cathode modulated, spent three days riding around in the Army duck, which was operating in this area and was in touch with 3SS, base station, at all times. Operating frequency was 3650 Kc., which was highly satisfactory, and no trouble was experienced with QRM, thanks to various Hams who saw to it that any intruder did a quick QSY! Thanks chaps.

The local constabulary is highly delighted with the local members of the Emergency Network and Number One Fella Gendarme assured 3SS that said Network will receive honourable mention in official report. The radio certainly saved much time and trouble, especially as the duck was on the job at all hours.

At Sale, 3ABF and 3AFG also had gear available, but fortunately, were not required. (That could be taken two ways, but I intend it to be interpreted the nice way, chaps!!)

Apart from the floods, all is quiet, the Sunday hook-up goes on as usual, in spite of screwy conditions on 80. 3QZ tells me the 3650 Kc. spot frequency has been in use for nearly six years—time sure flies.

NORTH EASTERN ZONE

As this will be the last notes I will write for this zone, I wish to thank all those who co-operated each month in the way of news; would like to welcome Les 3ALE as the new correspondent and hope he may succeed where I have failed—Good luck Les. 3UI about to become a VK2 v.h.f. Victorian representative; I can't say I blame you Alan. 3IJ working hard on a new power supply. 3JC now on 6 mx and is re-designing 20 mx beam, hopes to work more DX when it goes up another 15 feet. 3UI has shifted his shack and is very comfortable in its new location. Nothing heard of most of the fellows this month due undoubtedly to my not being in the shack. However, I will see you all at the Convention.

CENTRAL WESTERN ZONE

Before these notes are printed the date of the Annual Zone Convention will be fixed; as members may remember, at the last Convention it was decided to hold this year's event at Horsham towards the end of September and to make it a two-day affair for the benefit (in particular) of the visitors. Efforts will be made to cater for the YLs, XYLs, and harmonics, so that a good time may be had by all. A hidden Tx hunt will be held on 3.5 Mc. so that the three miniature tubes will be removed from the Secretary's keeping. In addition, a free-for-all scramble will be held to test the efficiency of all those portable set-ups. Efforts are also being made to arrange functions for those not actually taking active parts in the hunts or scrambles. Further details will be given over 3WI and in the next zone notes.

Conditions on the bands over the past month have been bad, long skip on 3.5, and blackouts on 7 Mc. 3WI on 7 Mc. conspicuous by its absence. Most of the country boys are now to be found on 3.5. 3ARL is worried (as usual) by the lack of limiting of his limiter on 28 Mc. (who cares about 28 Mc. anyway). Received a shock the other day when 3AKP told me the tower was up, and one of the three elements of the beam was in place; so it looks as if it wont be so long; Keith's biggest worry is the wx. 3RR still vainly trying to sell v.h.f. to the local boys. (Never mind Dick, I know how you feel, I can't sell s.s.b. either.) Dick even threatens to come on 3.5 for the next zone hook-up, so you can see how far he has fallen.

As a closing thought, keep the Convention in mind chaps, tune up the portable and D/F gear, and make a date with Horsham for the end of September.

Zone hook-up is now on approx. 3580 Kc., 1000 hours, second Sunday of the month.

GEELONG AMATEUR RADIO CLUB

The month of June proved an interesting one for members of the Club. Early in the month an interesting lecture was given by P. Perkins 3APK on Valve Characteristics. He used the blackboard from time to time and was asked many questions during the course of the lecture. 3IC has kept a morse class going through the month for students going for the next A.O.C.P. examination. An auction of gear also took place in which there was keen bidding.

At last meeting of the month the syllabus for the next 12 months was presented, after which the election of new officers took place and resulted as follows: President, 3IC; Snr. Vice-President, Max Stock; Jnr. Vice-President, 3ABK; Secretary, 3APK; Treasurer, J. Beckingham; Publicity Officer, 3ALG; Librarian, K. Hawkins; Committee: 3AKE, 3WT, 3BU, and Bob Reece; Technical Advisory Committee: 3AJF, 3BU, 3AKE, and 3AOL.

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QUEENSLAND

In order to get this month's Divisional news, particularly that outside the Greater Brisbane area, I almost had to conduct myself like a supplicant for alms. As a last resort, radioed a plaintive plea for help to 4EL and Eric responded promptly with one of the most comprehensive covers on Northern doings this column has had for some time. Thanks OM.

Here is a date to jot down on your Calendar —Friday, 15th August. On that evening, instead of the usual monthly meeting, a visit will be made to the Archerfield Aeradio Station. Members are requested to be outside the club rooms, next to Civic Theatre, Valley, not later than 7.15 p.m. so that arrangements for conveyance to the drome can be completed in time for a prompt 7.30 p.m. departure. The sight seeing tour of the innumerable transmitters will be conducted by Don 4GP, so there's no need to stress that the evening will be enjoyable and informative.

One-time writer of these notes, Howard 4ZU, last month set sail on good ship "Matrimony." Pat 4KB and John 4RT attended wedding ceremony. Understand Howard's new QTH will be Indooroopilly. Best wishes to both for future happiness from all the gang.

Thanks to generosity of Tom Atthey, who conducts our student classes, the Technical Equipment Library is now richer by the addition of a grid dip meter. Warmly welcomed at the June meeting were 4NV, an ex-G, and ex-ZL3FL, who should soon be airing a VK4 call in the Brisbane area. Although possibly known to most readers per medium of 4WI, we here set down for the record results of the VK4 Intrastate Contest: 1st 4FP, 2nd 4AW, 3rd 4NG, and then, in order of placings, 4PT, 4OR, 4RW, 4XJ, 4XR, 4HZ, 4JF, 4CK, 4BJ, 4AS, 4HW, 4RO.

A keen angler is northener 4MH. Suggest you get on the beam with Ted, and constant visitor to his shack, 4AX, if you want to hear some "beaut" fish yarns. Are conditions as bad as we paint 'em? Other Sunday morning, almost on 4WI's 14 Mc. frequency, heard DL4ET and PY2CK coming through on phone. Arthur 4FE also heard the DX. Russ 4PN gets about in a manner that would put even Marco Polo in the shade. One week he is in Cairns and the next in VK6. Overheard him giving account of travelling experiences and referring in glowing terms to the popularity in Perth of the Sunday evening 2 mx net. Good to hear 4FT active again after being QRL due to sickness; John risked reprimand from XYL and sneaked in a QSO with Jim 4XL.

Frank 9FN, up in Papua, reports that he will be active on 50 Mc. at the end of July. A forty-foot 4 element beam will do the radiating. Two new VK9s heard here during the month are 9HI and 9RC, both with solid sigs. Bill 4WD busy seeking reports on 80 watt phone rig just finished. Result of the first VK4 one hour Scramble Contest set a bit of a poser for the Contest Committee judges. Four contestants, 4TN, 4XR, 4PT and 4TY turned in identical scores—all had 14 contacts. Others heard on my kilocycle catcher taking part in the scramble included 4CZ, 4PD, 4CC, 4LT, 4CW, 4FP, 4OR, 4RN, 4GG, 4LM and 4HZ—making a total of 15 stations. No wonder the QRM was hot.

CLARE'S CORNER

On the air again from his new QTH at Northgate is 4RJ. Think it should be a good DX location Dell. Conditions can't be too good on 28 Mc. when we hear 4ZB and 4PX operating on 14 Mc. 4CC, Professor Cook, believes in catching them young. Clive recently lectured on Ham Radio at the local school and thereby sowed the seeds of future QRM. Aussie 4TN is still the most consistent operator on twenty. Roy 4FJ is nearing his 100th QSO with KL7AFR. Here's reason why 4NF hasn't been heard on the air lately, Cynthia has hidden the 866s till new house is completed.

NOTES FROM THE NORTH—BY VK4EL

Seems that conditions have kept most of the boys off the air as there seems very little to report. My own survey of the bands is that 7 Mc. is the only band where anything like a decent QSO can be had on either phone or c.w.—even that band is cranky—would say that it is the best of a bad bunch. 28 Mc. absolutely useless and devoid of signals most of the time with a very occasional VK or ZL or KH6. 21 Mc. opens at times in the afternoons early when some good VK contacts can be had at S9 both ways, but there is always the possibility of a fadeout suddenly terminating the QSO, which may be S9 plus at both ends. 14 Mc. is patchy, with the only sign of Europeans in the early mornings up to around 9 a.m., but most times unworkable and with a hollow sort of sound, and they seem to be working amongst themselves or Ws. 7 Mc. good-oh on week-ends when populated in the daytime, and good to poor at night, but after 2000 hours E.A.S.T. is full of foreign phone stations and c.w. stations, which seem to wander all around the place.

Harry 4KW not on much, QRL on Brampton Island installing some sort of commercial radio equipment. John 4FW not very active due to a full time job with the choir of which he is maestro, have heard him working on 14 Mc. very little. Alec 4MA QRL studying for exams and not active. Bill 4BQ is intermittently on 7, 14 and 50 Mc. Harry 4ZP seems to only be on when heard with 4EL which he skeds each day. Edgar 4GF puts out a really remarkable signal for his 15 to 21 watts, slugs it out with the best of them on 7 Mc. phone and c.w. Ted 4EJ not active, except on the bowling field where he is extremely active.

Frank 4QL QRL on a new v.f.o., a Clapp, that he keys for break-in working, has a beautiful compact rig out there at Garbutt, a real credit, fully band switched from 3.5 to 28 Mc., and gets out too. Jock 4DE not very active, but when heard puts out a nice sig mainly on 14 Mc. c.w. Wally 4RU seems to have become a golf and talkie fan these last few months. Tells me he has re-built rig and will soon be on again, hope so Wally. Graham 4BX not heard for some time, but threatens a comeback soon. Doug 4DB has not sorted himself out in new house since settling down with new daughter who no doubt keeps him occupied; what about it Doug, let's hear from you.

Herb 4JW was worked and had a mighty signal on 7 Mc. a few days ago, nice to hear the old timers on again. Andy 4BW another old timer, bobs up now and again, but mainly to make sure the emergency gear doesn't gum up, puts in a mighty signal and has just finished a new modulator, and it sounds good too, old timer. 4EL, well as for myself, in any case I sort of knock off work to carry bricks, but have to fill in the time somehow between shifts, out in the mulga; am active on all bands, that is 7, 14, 21 and 28 Mc. and shortly will have a rig going on 50 Mc., am always on some part of the day, main interest at moment is seeing how the 21 Mc. band will perform and keeping skeds with old cobbers in Brisbane and elsewhere. Unfortunately my daily sked with G5ZA has fallen through after the 600th contact, can only use the mill to contact him now as no sign of him at 0700 G.M.T. these days.

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SOUTH AUSTRALIA

The monthly general meeting of the VK5 Division for June was held as usual in the club rooms to an audience of 96 members and one visitor. The guest speaker for the night was Mr. Sid Wardle (5OU) and his subject, "Stability in V.H.F. Amplifiers." Sid gave a very concise and instructive talk on this subject, illustrating his remarks on the blackboard in such a manner as to make the whole talk clear even to the youngest associate member present. The talk only occupied fifty minutes but all present were quite surprised to note just how much ground could be covered in so short a time by one who had such a grasp of his subject. The vote of thanks to the lecturer was ably proposed by 5GL and the audience showed their appreciation in no mean manner.

Only one visitor honoured us with his presence, to wit, Mr. S. Mahony, and to this gentleman we say welcome and be sure to come again. The meeting established what is probably an all time record for an early finish, coming to a conclusion at the incredible time of 9.40 p.m. However, the Chairman pointed out to those present that there was no need to leave immediately and perhaps they would like to have a "natter" among themselves. The members needed no further urging to do this, and in retrospect it would seem that an opportunity to have a good "chinwag" is something that the boys would like occasionally. I left at 10.30 p.m. and nobody showed any signs of leaving, and on checking up later I discovered that all present thought the little "get together" after was quite an innovation, so we learn something new for our meetings.

Every two or three years I seem to include in these notes a paragraph concerning Ralph 5TR changing his vocation, and every new paragraph about him seems to always be stating how the particular change of job is taking him higher and higher. This is only a lead-up to the fact that Ralph is now Inspector for Public Entertainments in South Australia. Nice work OM, I salute you, and I always had you first favourite for the job from the beginning.

The other night I was working in my shack when the fire engine went past at top speed. Jumping on my Jaguar-two-wheeler I hastily followed the brigade and was amazed to find that it stopped next door to the QTH of Hal 5AW. From the remarks of the crowd gathered at the scene of the fire I pieced together what is probably the story of the month and also my biggest scoop. Hal was about to get into bed when the lady next door called out that there was a fire in her house and would he please help. Trainee fireman Hal needed no further call to duty, and hastily he raced into the house next door, holding his trusty fire extinguisher which he had grabbed from his car. Deputy fireman Hal found that the fire was in the front room and let go with the extinguisher, being rewarded with a gentle little trickle which wouldn't have put out a candle, let alone a fire. Leading fireman Hall seized the cause of the fire, a kapok cushion, and rushed it outside on to the verandah. Station officer Hal rushed back into the smoking house in search of damsels in distress, but everybody was outside in safety. Deputy chief Hal came out on to the verandah and the gathering crowd cheered him to the echo whilst he modestly said, "It was nothing, all in the line of duty." Fire chief Hal advised everybody to go home to bed as the danger was now pased, and with the huge crowd starting to leave, somebody shouted, "Three cheers for fire controller Hal," and the still night air was filled with acclamation for the hero. In a statement to a representative of "Amateur Radio" later, Hal said that next time that he is called out to a fire he thinks that he will grab a hose with some water in it, but he was much too excited to think of that at his first fire!

5TW had his aerial blown down during a recent storm at the Mount. 5CH still inactive. 5MS patiently waiting for the power to be laid on and until that happy day, Stuart is twiddling his thumbs or something. 5JA had the misfortune to blow up his transformer for the final and will be out of action for a while. 5FD is in smoke and there is nothing to report concerning John. 5KU has the boom up ready for the elements of the beam and it is expected that Erg will be able to report next month that all is complete. 5CJ has nothing to report this month, but Col hopes to have more news next month as the weather will be getting a little warmer and the shacks more habitable; many thanks Col for the news.

My chief city spy, Robert Pearce, writes to tell me that conditions have been so bad, and the nights so cold, that nearly everybody has been spending their leisure hours before the fire and therefore news is rather scarce. Nevertheless he manages a good batch of news for the month to which I say "I thangyou." 5XJ has built up a new modulator, Class B 807s, and Col is driving them through a pair of triode 6V6s and is well satisfied with the results. 5ZL is having trouble with moisture in his power supplies, first a h.t. tranny blew up and then after straightening things out, on switching on again, up went a filament tranny. Esperanto as spoken by Carl is sure a picturesque language. 5WY has built up a fine 6 mx xtal controlled converter which is doing a good job, but John had a bit of trouble at first by mixing up the grid and plate of a 12AT7 with confusing results, but all is now well. He has also built up a "QX" and is very pleased with it. Where do they get the energy?

5WP, who is back on the air after six months absence, has installed a l.p. filter and a low level clipper, but at the moment of writing Alan has a little feedback trouble on his hands. 5CA has returned after a holiday in VK2. 5RY has also built up a Class B 807 modulator but is in the midst of a spot of hum trouble and slight distortion. 5LC has obtained a motor to rotate his beam and is now in the throes of determining a way to hook it on. Les has also apparently had a spot of Rx trouble, judging by his mutterings to himself on the air to himself! Robert also said that he has been listening on 14 Mc. every day for a fortnight and has not heard one phone signal, only 5BY and 5AJ on c.w., and he wants to know is the band that bad or must he trim his coils a bit.

Speaking of Dougal 5BY reminds me that he was a visitor to the first station in the State the other day, and when I bumped into him he asked to have a look at the Tx, etc. I told him to go down the passage to the last door on the left which was my office and wait for me. In all seriousness he marched off, and when he found himself in my "office" his roar of laughter could be heard all over the building. The bigger they are, the harder they fall. You beaut!

The Upper Murray Hams held their meeting this month at the QTH of Hughie 5BC at Springcart Gully, yes fair dinkum, that is the name, and quite a deal of earbashing took place especially by 5RE and 5ME who found that they had many R.A.A.F. experiences to recall. It was also found that many of the boys had met personally but were only known to each other by their call signs. It was agreed that the members would meet on the second Tuesday each month at the QTH of one of the members who would take it in turn to act as host. The next meeting will be held at the residence of Alex Kelly and it is hoped that another evening of earbashing will be enjoyed by all. The first meeting incidentally ended at the witching hour of midnight after the boys had partaken of goodies kindly provided by Mrs. 5BC. I hope Hughie did not make the tea, boys, as when he makes tea you need a knife and fork to drink it, as I know from **bitter** experience.

5RE has departed for a visit to Perth, so I expect that crime has decided to take a holiday too, whilst Hobby is on vacation. If ever I come up in the court before him I will turn the conversation into radio channels and then perhaps he will only send me down for three months, which would bring me closer to "Doc." The mere thought entrances me. Brrrrrrrrr!

5TL has settled into the life of the village very quickly, but then why not, it is no new experience for Tom, moving from country town to country town as he has done. He is not on the air yet but it won't be long now. I believe that the town turned out in full force to see Tom in shorts and big Army boots using a shovel the other day. If only I could have been there, what a time I would have had. Cheers Tom, from all the Council.

5MA is not very active and all that Fred seems to do is to give Hal 5AW a report each Sunday morning with respect to 5WI. He has only a temporary shack at the moment and it is too cold these nights. Thanks for the notes Fred, and I like being addressed as Mr. Parsons, that makes them grit their teeth down here. Just plain jealousy, that's all.

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WESTERN AUSTRALIA

Well, gentlemen, this is where I feel I should bow out of the Ham picture for good. You see, after earbashing all and sundry for the past umpteen years about the difficulties of operating a Ham rig on d.c. mains and the wonderful things that I could do if only I had a.c.—if I don't launch out soon with a large quantity of new gear I'll be finished for good. Even my best friends won't speak to me! For the long-awaited sine waves are here, arriving in batches of fifty each second. So my bluff's been called gentlemen; what happens now I don't know. But it certainly is good to have the "real McCoy" instead of the home-made stuff. A very marked improvement has taken place in the local noise level too, sundry domestic and commercial refrigerators having swapped their saw-tooth damped wave generators for modern induction motors.

My regular spy has reported for duty once again but I'm afraid my v.h.f. operator, 6BO, has been shot down by a MI-5 as there's nothing in the mail from Rolo this month.

There are times when I feel genuinely sorry for 5PS for he does appear to take a lot of abuse over in VK5 and I was reminded of how lucky this scribe is to be 300 miles away from the seat of government when I read in the minutes of the 24th June VK6 Council meeting that somewhere, somehow, a discrepancy of 1/- had occurred in the 1951-52 Balance Sheet. Can you imagine the meaning looks and vile slanders that would be bandied about if that had happened in VK5? Can you imagine the ditto ditto ditto if I were a Councillor? My own personal theory on the matter is that the bob was used to buy a cigar to bribe "Skipper" to take over the auditor's duties! Anyway, it's very pleasing to read that 6WS has offered to take this task in hand; an auditor's job is a very responsible one, yet I can think of no one better qualified to tackle it than "Skipper."

At the same Council meeting the Treasurer presented to each Councillor a copy of a list of unfinancial members. It was decided to send a special circular to each unfinancial member advising him of the position regarding the removal of his name from the membership register and mailing lists for "Amateur Radio" and the Divisional Circular. The Lecture Programme for the next six months was submitted by 6GM and it makes interesting reading including as it does talks on radar, picturegram

equipment, experiences on Heard Island (by Kevin Johnston, ex-VK1KJ), x-ray equipment, "My Trip to England" (6WS) and antenna patterns. The Lecture Co-ordinator has full control of the situation and you are promised some really tip-top lectures for the remainder of the year.

There has been some discussion lately over the air and over counters and other places where Hams foregather about the need for the Institute to help those experimenters who desire to build up bridges and other gear calling for components of known values to a reasonable degree of accuracy. Various schemes have been put forward and at last Council has decided that rather than the Institute purchase standard resistors, condensers and the like with the attendant risk of damage in transit, it will set up a standard measuring service. This means that if you are building a multimeter, a measuring bridge or any other piece of gear intended for measuring something, then the W.I.A. will measure your resistors, capacitors or inductors for you to within very close tolerances—certainly close enough for Amateur substandards. But if you've just bought a 1931 model broadcast set at an auction and junked it—and you can't read the values on the components DON'T send them to the W.I.A.! The service is for parts needed for measuring equipment only.

Reports from the Spy Ring. A recent surprise was the re-appearance after a very long silence of 6HT. Harry was heard using what appeared to be f.m. Another old-timer comes back! So 6KW is another Ham hypnotist! Dark horse, Ron OM. Never would have believed it of you. Yet Barry looks a decent, clean-living lad too—and he's a possessor of the " 'fluence." Wot next? 6XI is another who made a recent comeback on 7 Mc. although it seems Colin is more interested in the v.h.f's. and in mobile working nowadays.

Talking of mobiles—did you see the recent "QST" article about the "California Kilowatt" on wheels? 800 watts input mobile!! And it takes me a roomful of junk to put 33 watts into a humble 807 on 40! A recent mention in this column of the VS1AD/VK6JW technical pow-pows on 14 Mc. has brought forth the information that they're still on—but now it's Sunday mornings. VS1AD says VK6s don't get up early enough in the mornings. Apparently he has to wait around for us to thaw out. 6WT (". . . and now sir, have you any statement to make to the Press on t.v. or not t.v.?") was heard putting out a signal on 7 Mc. recently; hope there'll be more of it, Dave. Another backslider to return to the fold of 7 megacyclists is Bill 6MB.

The leaves of the grapevine have been rustling to the effect that 6DX should be back home soon. No doubt with some genuine imported cray-pots for his many 20 mx cronies. 6RU is re-building and the plans include a new exciter to include 21 Mc. Girding your loins Jim for the "R.D.?" I am told that Tom 6TR now has the key to the situation and a recent issue of a week-end newspaper displayed a picture of him complete with three charming YLs, receiving the "key of the door." Careful Tom, or Ham Radio will be taking a back seat! Blake 6GS has been on 7 Mc. again lately after a long absence. But I believe that can't be taken as a sign of inactivity for he's still as keen as ever on 6 mx and works there often. A recent visitor to his old home town was 6FC from Narrogin. Frank was heard from 6BO's shack but as more visitors arrived, Rolo closed down. Was the competition too great, Rolo? (Must have been for he didn't send me any notes this month. Black mark, Hetherington!)

Clarrie 6LL is an exclusive band man. But my spy doesn't know whether it's exclusive 10 or ditto 20. What happens if all bands come good at once, OM? There's another band-switched Tx on the slipway—6BC goes modern. Have they converted you at last, Bert? Don't know what Ham Radio is coming to—filters here, fuses there, safety-interlocks to the left of 'em, completely screened rigs to the right of 'em.

A Ham with a real "whinge" is 6RW. Bob had one dose of the 'flu and then another right on top of it! His radio silence would have been broken ere this had not the germ decided to attack twice. My sympathies, Bob. It was rotten luck. 6JW has been experimenting with a new modulation system but unfortunately the contact I had with him was marred by local (d.c. motor) QRM. Try again now the a.c. is on here, John! They tell me Dick 6YZ is trying his hand at making relays—assuming the right one at the right price doesn't arrive from elsewhere. Never mind, Dick, 6LJ's going to lecture about 'em—in December! 6KW, once one of the most consistent of DX operators, now earns the reverse of that title. What's due to happen, Ron? And where and when?

ACCURATE FREQUENCY TRANSMISSIONS FROM VK3WI

The next Accurate Frequency Transmission will take place on Thursday evening, 28th August, 1952, on 3.5 Mc. Details of the operating procedure and times of operation will be found on page 8 of the January, 1952, issue of this magazine.

A distinguished visitor to VK6 a few weeks ago was Dr. G. H. Munro, chief of the Radio Research Board of the C.S.I.R.O. who lectured before one or two august bodies (not you, Pansy! Sit down!) and also made the trip to the Ionosphere Sounding installation at Watheroo. Among VK6s who met and talked with Dr. Munro were 6MO and 6GH, the latter almost a "school-mate" of the worthy doctor's in England at a time when both were doing radio research work. Among some interesting recent discoveries revealed by Dr. Munro was the fact that the ionosphere possesses ripples of semi-cylinder shape which move in certain directions during winter and then appear to reverse during summer. It is to be hoped that 6GH will either persuade Dr. Munro to communicate some of these findings to the W.I.A. or that George himself will prepare a lecturette on what promises to throw new light on propagation.

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TASMANIA

A most pleasing feature in connection with the July general meeting was the excellent attendance. The meeting was held at the usual venue on Thursday, 3rd July, under the chairmanship of Mr. Bob O'May. As the meeting progressed, it became evident that there was standing room only at the rear, and it was indeed most encouraging to see such a representative gathering. The meeting admitted two more associate members to the ranks—namely, B. L. Morey and A. N. Davis, both of Hobart. We extend to them a hearty welcome, with the hope that their "transit time" between associate and full membership will be of short duration.

After a little more general business, all present sat back and prepared to absorb the "gen" on TR1143A 2 mx conversion, as delivered most capably by 7OM, 7LE and 7BJ. The Tx side was handled by Bob and Len, whilst Joe took care of the Rx side. Just about all aspects of the conversion were covered, and must have been of great help to members either possessing this equipment, or contemplating purchase thereof. At the conclusion of the lectures, a vote of appreciation by 7LJ was warmly endorsed by all present. Incidentally, the last I heard of Joe in connection with 144 Mc., was that he had just purchased an armful of 6J6s and was really going to town in a big way.

By the time this appears in print, the R.D. Contest will be just around the corner, so I shall take this final opportunity to alert members in this regard. A concerted effort is required from as many members as possible, and it behoves all who desire Tassie to repeat past performances, to see that their gear is fit and able.

Another point which I feel should be brought to the attention of southern members—a point which, I am sure many have overlooked, is as follows. The regular weekly operation of 7WI makes certain demands on the time of the operator concerned, and in some cases, the broadcasts are carried out at great inconvenience. It must be most discouraging to carry out a broadcast under such conditions, then stand by and listen to acres of silence. Northern and North Western members always rally when receiving conditions permit, but the response from Southern members is frequently nil. Perhaps many feel that, having no business for 7WI, a call is rather futile, whereas on the contrary, I know that all calls are welcome. A short call, if exchanging nothing more than signal reports, at least tells 7WI that he is getting out, that someone is listening, and he is not entirely wasting his time. In the 80 mx band, 3672 Kc. has been used as well for the last three or four broadcasts, and the next contact 7WI has on that band will be the first. Four more broadcasts will have taken place before members read this, and if the situation remains unchanged, well I can only say "what about it chaps?"

7KA, with shack under the house, is finding ambient temperatures anything but to his liking. Should be quite a good excuse Ken, for putting a compact, small 2 mx rig in the living room. Think it over, and let us know when to listen. Secretary 7FJ seems to have overcome the problem of how to get the rig into the house with one swift move, and could possibly be prevailed upon to drop a hint or two. I'll bet this copy of "A.R.," however, is not left lying around the 7FJ menage.

7RY is well advanced with the construction of a new frequency meter plus 100 Kc. standard. I am amazed that you still have that 100 Kc. rock Fred. I have seen many envious eyes (including mine) cast upon it. Of course, if we can spirit it away with the frequency meter wrapped around it—well, so much the better.

Caught a fleeting glimpse of Leon 7JP behind the wheel of a certain green vehicle. Guess we

had better attach the P.M.G. label Leon, or someone is bound to ask whether it was the green cart. Anyway, long time no hear son. 7BK is now resident in Hobart, and, while I have no knowledge of future plans, trust he will soon be active again.

7CJ is taking kindly to the idea of a small, portable rig, and the possibilities thereof. Suggest you devote a couple of days of that long leave to the idea Alan, preferably before the R.D. Contest, because we can sure use the extra points. Tommy 7FM has just completed a new Rx, complete with QX. 7RX has a strangle hold on a 5BP1, and Brian 7BH, well we are just not hearing you these days. Time you returned to the fold.

That's all for this time. In closing I might add that any news of general interest is always very welcome—so don't be shy.

NORTHERN ZONE

The June meeting of the zone was held at the Trades Hall on Friday, 13th. A very fine lecture was given by 7PF, his subject being the various methods of communication and safety devices necessary to keep our skyways running smoothly. Peter covered an interesting subject well and enabled us all to appreciate the care and planning that goes into making our air lines something to be proud of. A vote of thanks was ably moved by our President, 7AM, and recorded in an appropriate manner.

Once more I find myself in the role of deputy to our correspondent, 7XW, who is at long last moving into his new QTH. Chris does promise bigger and better things when settled in. 7LZ heard on 7 Mc. c.w. a few times during the month but conditions there don't make for a very great interest. 7AM is nearing the completion of the 2 mx super dooper and is reported as being quite happy about the results to date. 7GM putting the finishing touches to his all-band Tx and is another reported to be very happy with the results. 7LX finds a few minutes every so often to gaze fondly at the 8JK in between exams. Ken wants the band to really open to demonstrate its qualities.

7DS is evidently still alive and kicking as I heard him the other night on 7 Mc. c.w. with a nice sig. Don't see much of you these days Bill. Get Peter to tell you the date of the meeting. 7HY still forsaken Ham Radio for golf. Here at 7RK the main interest has been an electronic key which probably explains some peculiar un-morselike characters emanating from the rig but things have settled down now and it really works like a charm. The only drawback with it now is the operator, but he'll learn—I hope. Heard from associate Perc Crawford that 7BQ is on the way home from parts distant and should hit VK about the time this sees print. Len will be very welcome back here and we look forward to hearing some details of his travels abroad. Don't forget, the date to keep clear in August is Friday, 8th.

NORTH WESTERN ZONE

Our congratulations go to Syd Medford who is now a fully qualified Ham and is operating under the call of 7SF with 100 watts and was heard with 7WA recently working VK2 and VK5. Another of our members who may be on the air soon is Murray Richardson who has passed and is awaiting his ticket, fine business. It is alleged that 7AI is studying radar with a view to detecting many things. The bands have been very quiet here lately except for odd occasions when quite a lot of DX stations can be heard and the other day, one of these occasions, saw 7KB work 20 different countries in 1½ hours. Our monthly meeting, which was to have been held on 4th July, was postponed a week to suit members.

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CORRESPONDENCE

The opinions expressed in these letters are the individual opinions of the writer, and do not necessarily coincide with those of the publishers.

FEDERAL CONVENTION

23 Lambton Rd., Waratah, 2N, N.S.W.
17th June, 1952.

Editor "A.R.," Dear Sir,

'Tis said that many a true word is spoken in jest and the mention in Federal Notes in your June issue of VK6 Delegate, Ron Hugo's, mesmerism and hypnotism at the 1952 Federal Convention makes one wonder what black magic F.E. insinuated into the proceedings. As a guest of Federal Council at the Federal Dinner in my capacity as President of the Hunter (Newcastle) Branch of the N.S.W. Division, it perhaps ill becomes me to criticise my hosts, but, after all, we were invited to sit around and listen.

At the outset I must confess my ignorance of the Federal Constitution, but despite that lack, certain principles are fundamental. What astounded me most was that F.E. had a vote in the proceedings and F.E. delegate voted as directed by Federal President.

Constitution or no constitution, is not Federal Council a body created and elected by the Divisions to implement the mutually agreed wishes of those Divisions? Why, therefore, should F.E. have a vote to say yes or no to what the constituent Divisions desire to be done. Such a situation seems to my humble intellect to be both ludicrous and Gilbertian and going dangerously close to a state of affairs where our servants become our masters.

And, when all is said and done, what earthly use are Federal Conventions on the existing basis? The agenda for this incomprehensible moot is circulated to all Divisions and after consideration by their members, the respective delegates are instructed how to vote.

That being so, why go to the expense of a gathering of the clan from far and wide unless delegates have power to vote as the merits of the arguments advanced for and against may convince them as thinking individuals.

Assuming therefore that black magic did not operate and that delegates were free to vote as convinced by logic in debate, does not that presuppose that every motion on the agenda must receive the courtesy of a formal seconding so that discussion can take place. And it is beyond question that several motions were stillborn because of the binding of delegates.

So through your columns, I crave leave to cry "to my aid ye pounders of brass," so that all black magic be swept aside and F.E. and its hosts be discomforted with the keen edge logic and reason.

—LIONEL T. SWAIN, VK2CS.

23 Lambton Rd., Waratah, 2N, N.S.W.
7th July, 1952.

Editor "A.R.," Dear Sir,

I am in receipt of a letter dated 3rd inst on a Victorian Division letterhead from one J. Hurley who styles (her) himself(?) Administrative Secretary, acknowledging, on your behalf, my communication of 17th June.

Since addressing you on that occasion, I have been reminded of the letter from Warwick W. Parsons, VK5PS, in your issue of last March regarding an alleged reluctance to print certain comment and assured that my communication would suffer a similar fate.

That F.E. has, through its policy book, taken unto itself the right to censor all criticism so that, presumably, members shall be protected from heresy and schism rather suggests that it considers itself to be made of different clay (or sand?) to its overseas contemporaries.

As a member of the R.S.G.B. and a reader of "QST," I have noted no reluctance on the part of either organisation to print letters containing any form of criticism and I suggest that F.E. would be well advised to permit the columns of your journal to be used as a "safety valve" for the feelings of members, albeit always retaining the right of reply.

The lack of any such letters in your columns, due to this guardianship of our Amateur "soles" can only suggest to anyone who contemplates writing that all is well with Amateur Radio and he is apparently the only misguided one with a chip on his shoulder.

The ultra-conservatism exhibited by members of F.E. at the Easter Convention gave me furiously to think and the adoption by them (or it) of any attitude of papal infallibility has apparently brought about a state of complacency that when the growing dissatisfaction in Amateur circles boils over, they (or it) will plaintively bleat "my, my, no one didn't tell us."

I therefore look forward to seeing my letter published in your August issue (what a fitting adjective!) with any informative comment F.E. designs to offer.

—LIONEL T. SWAIN, VK2CS.

[Federal Executive welcomes Mr. Swain's letters and has no more hesitation in publishing them than of many others in the past. There are only two known instances when this Executive caused any comments—whether written as members' correspondence or Divisional notes—to be withdrawn from publication.

On these particular occasions the Executive acted on the directions of the Federal Council as laid down from time to time as policy. The policy directive under which the Executive acted was in fact a motion submitted to the Federal Council by Mr. Swain's Division in 1950, and concerned the responsibilities of Federal Council towards its official organ—"Amateur Radio." The specific responsibility concerning the reasons why certain comments were withdrawn on these occasions reads: "any matters which might prejudice relationships between Divisions or between Amateurs generally." **The Executive has never withdrawn constructive, informative or misinterpreted information from publication.**

A perusal of overseas journals will indicate a strong tendency to adopt the same policy; seldom, if ever, does one see facetious criticism or personal criticism published in these journals.

Mr. Swain's criticism of Federal Executive—and inadvertently, the Federal Council too—arises from misinformation of certain matters referred to in his correspondence, and, not only ignorance of the Constitution (which he readily admits), but ignorance of the manner in which the Executive and the Council function under its Constitution.

Unfortunately, due to the necessity to curtail space in the magazine, it is not possible to publish the rather lengthy reply required to satisfactorily answer the various points arising from Mr Swain's letters; the Executive has written direct to Mr. Swain.

However, it seems evident that quite a few members of the W.I.A. are not aware of certain details of the functioning of their own Institute, so Federal Executive proposes, in its columns on the Federal Notes page, to acquaint members each month with some of these details.

If the members don't like the mechanism by which the Federal administration works, then it's in their own hands to change it. In the meantime, you can rest assured the Federal Council and its Executive body works to the Constitution you approved of from time to time. —Federal Executive.]

VICTORIAN V.H.F. FIELD DAY CONTESTS

Editor "A.R.," Dear Sir,

I notice with sardonic amusement that the v.h.f. gang are going to cease v.h.f. field day contests because of lack of interest.

Has it stopped to think why this so called lack of interest exists. During the past v.h.f. field day year, 3UI, 3APF and 3JC were out every day after travelling some 40 miles to a good location. Signals came through at good strength but few were interested to work a country portable station.

One v.h.f. man, considered to be one of THE v.h.f. men, went so far as to say, publicly on the air, that he just wasn't interested in working country portable stations.

If members of the Melbourne group express themselves so, how can it be expected by the same group that country stations take an interest.

Same man was reported to be moaning over lack of reports on his v.h.f. transmissions. I wonder why?

VK2 v.h.f. have already asked co-operation of the v.h.f. gang in this zone for the coming field days, so don't wonder why your CQs are unanswered when as an after thought you turn your beams north. This, of course, will not include the few regulars who always were obliging.

—VK3JC, N.E. Zone Correspondent.

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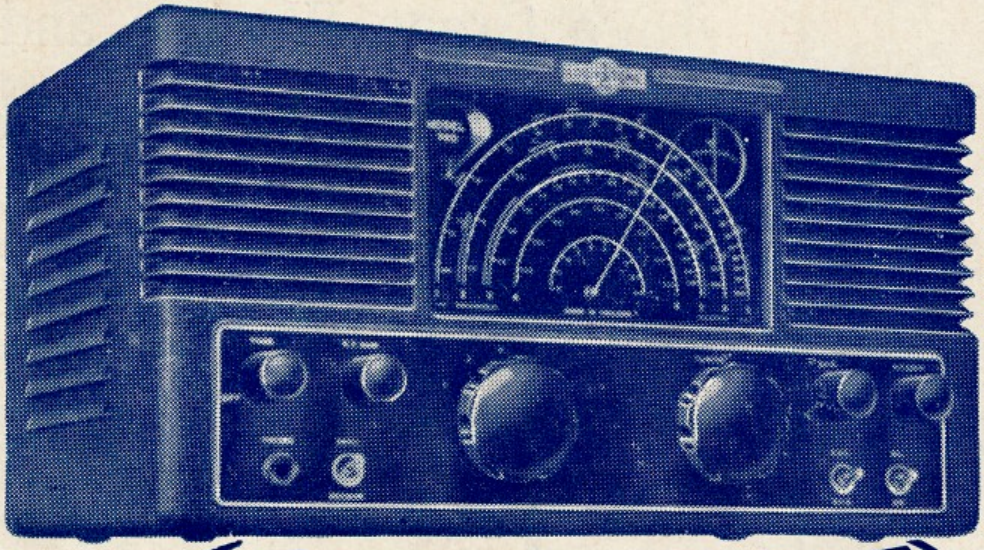

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